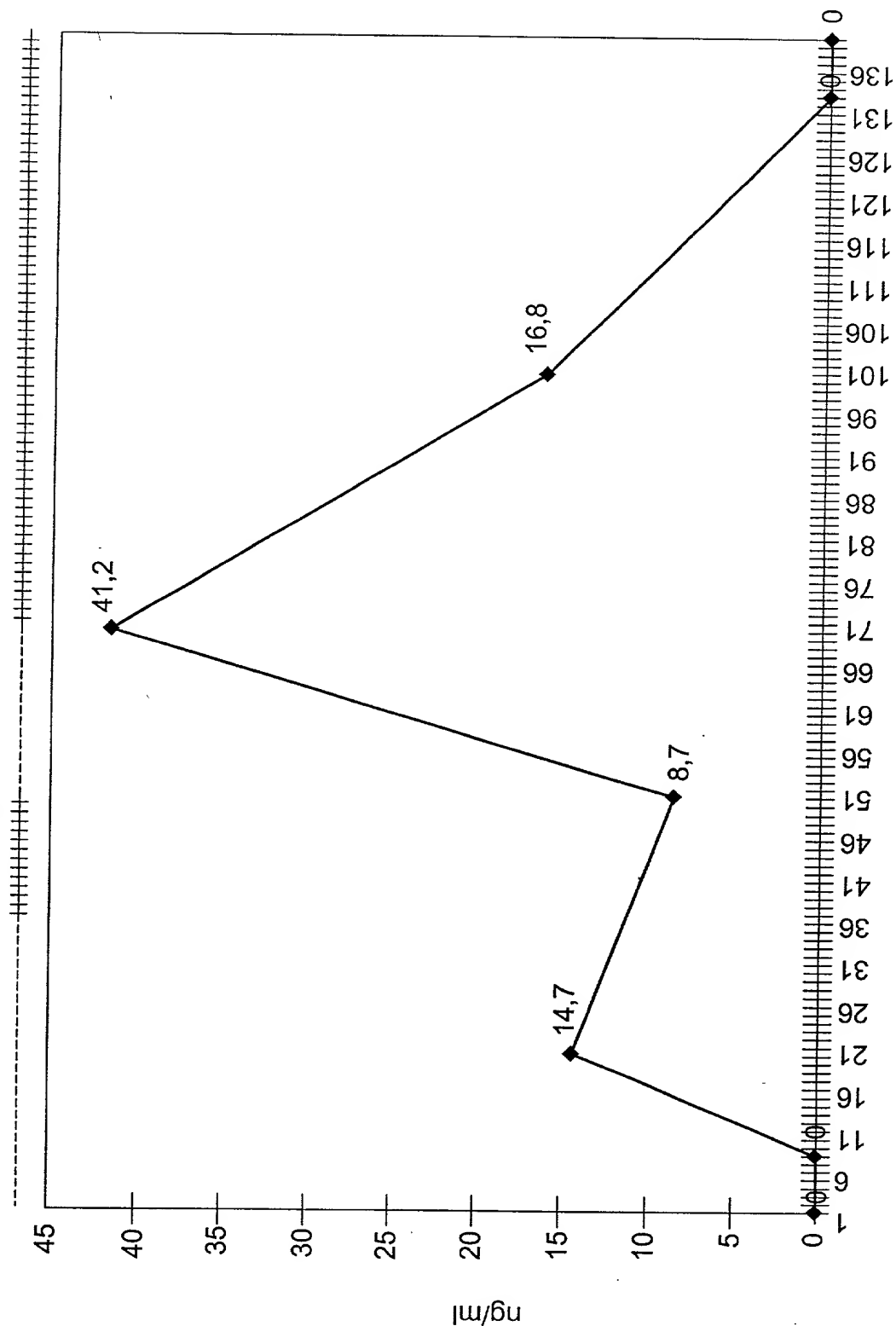


Doxycycline-Test in vivo (hIL-3)



Wochentage FIG.1

Doxycycline-Test in vivo (hIL-6)

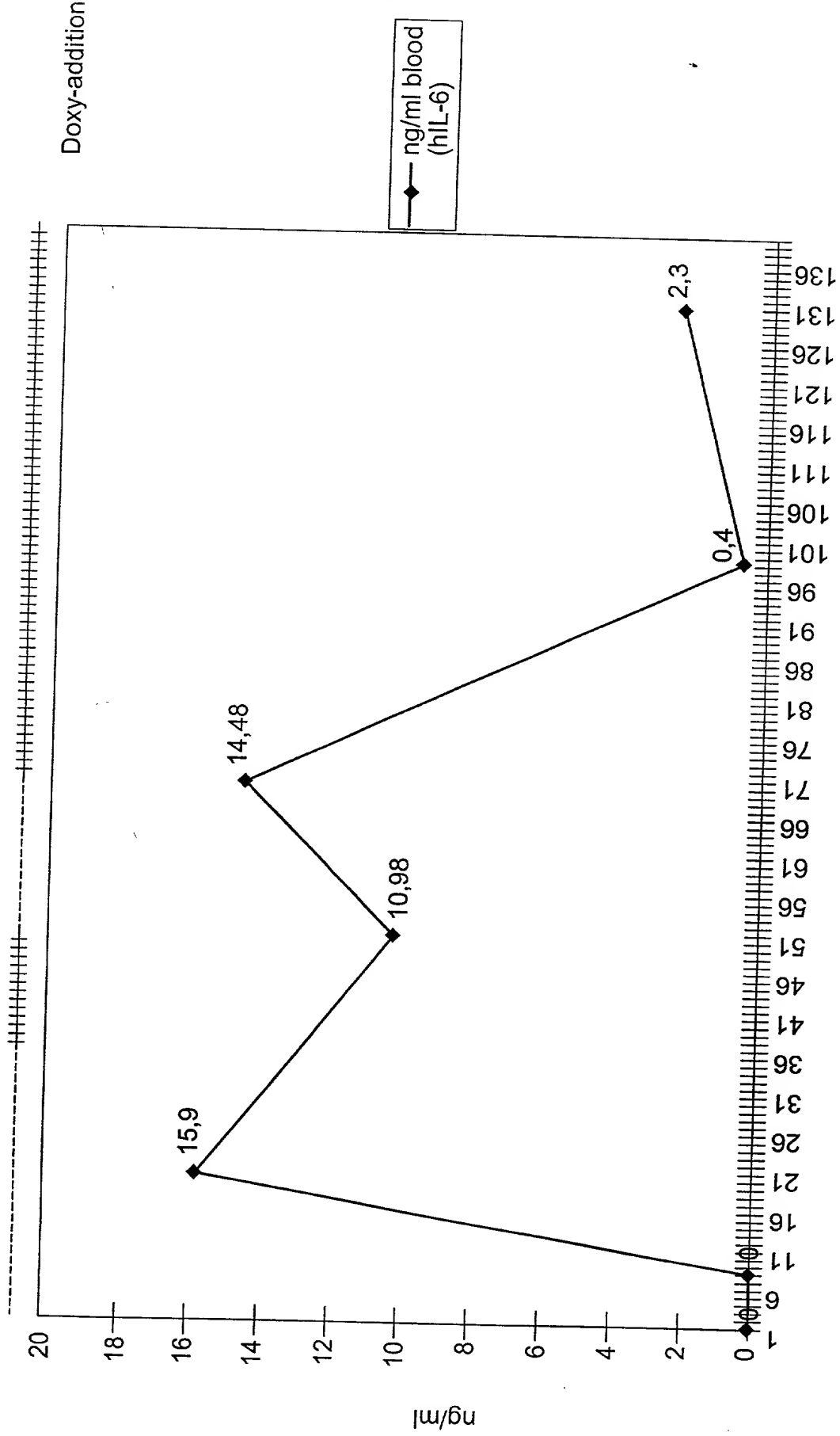


FIG.2

Scid-mice [OG,SM,OD,SC(-)]:hIL-6

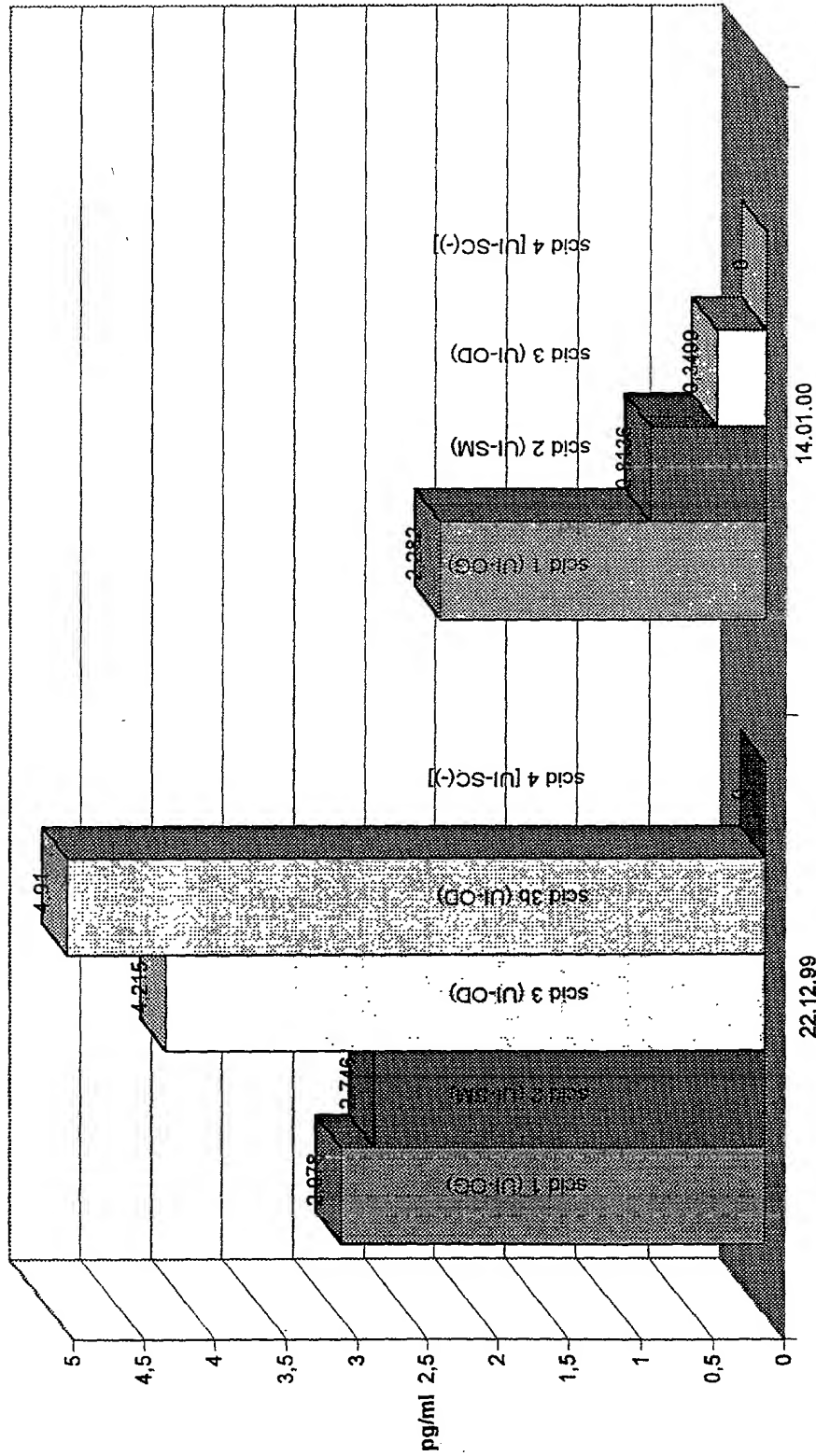


FIG.3

nude mouse 4 and scid mouse 0 (SN),LC

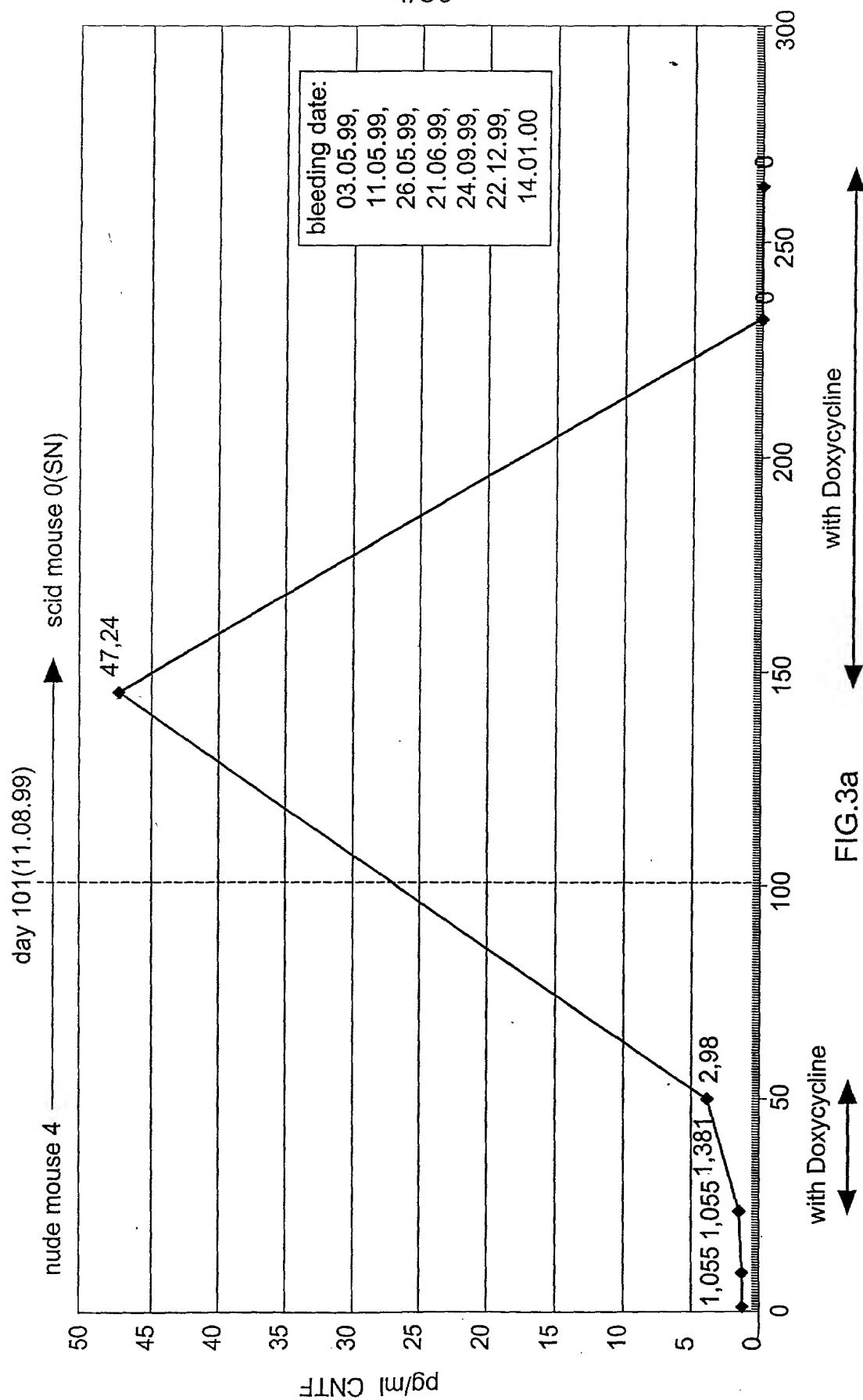
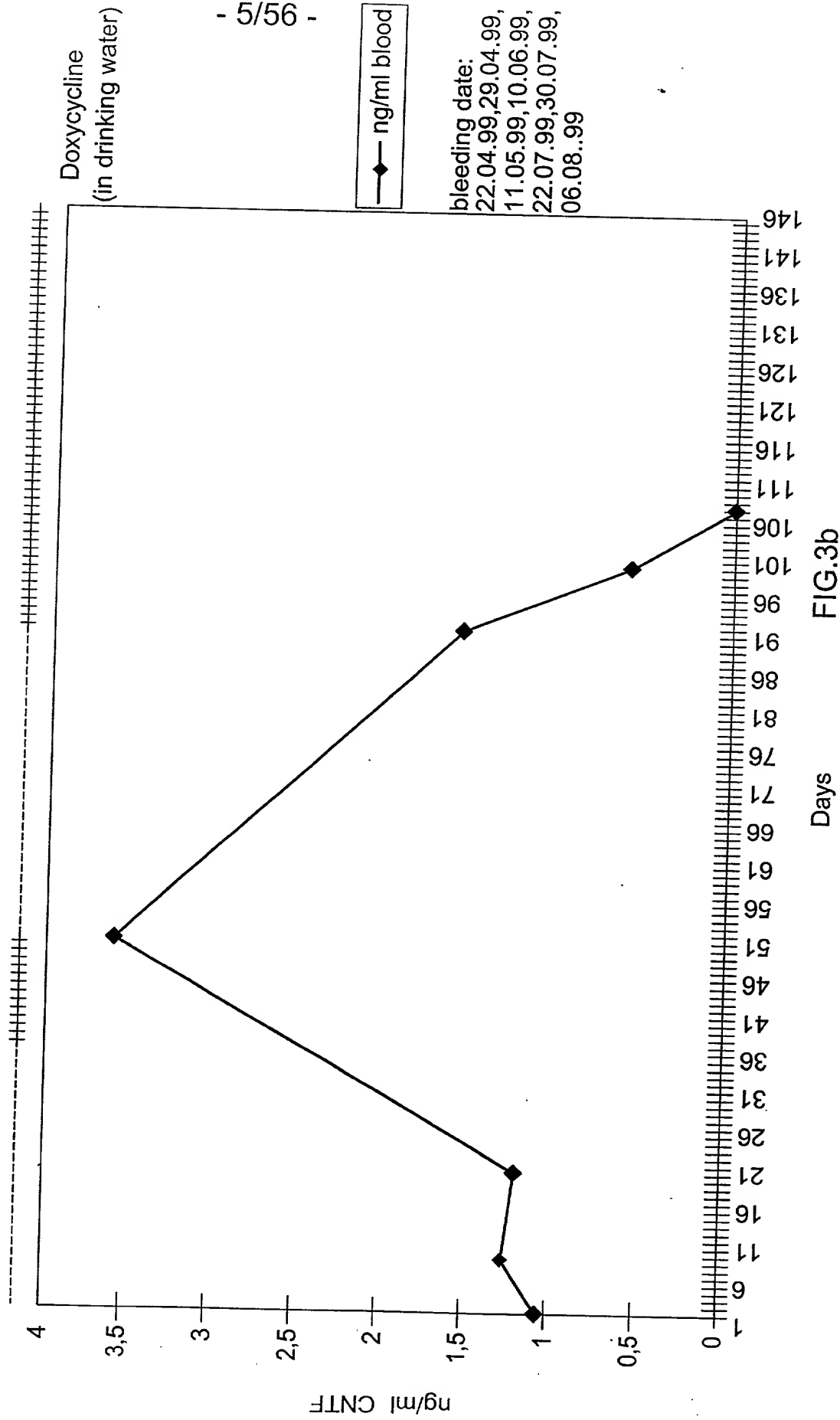


FIG.3a

Doxycycline-Test in vivo (nude mice2)



Cloning of growth factor genes

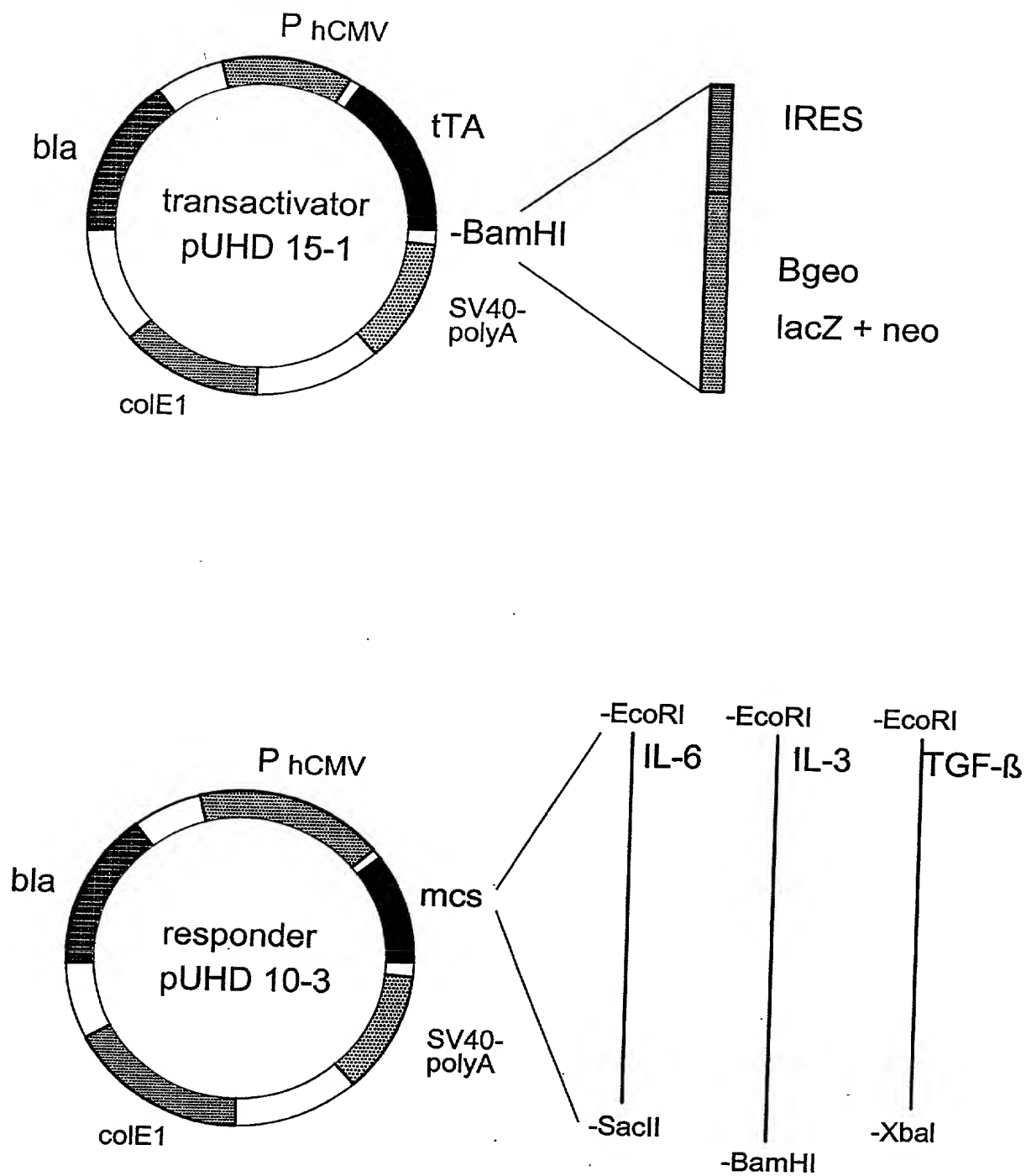
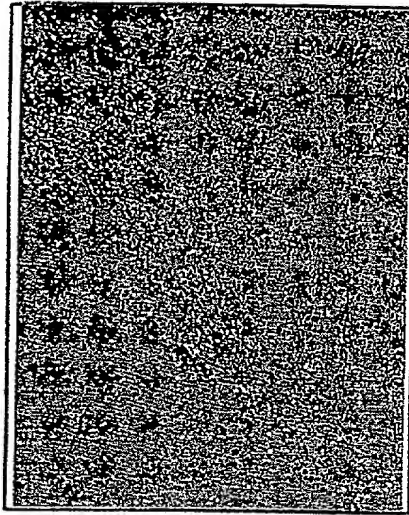
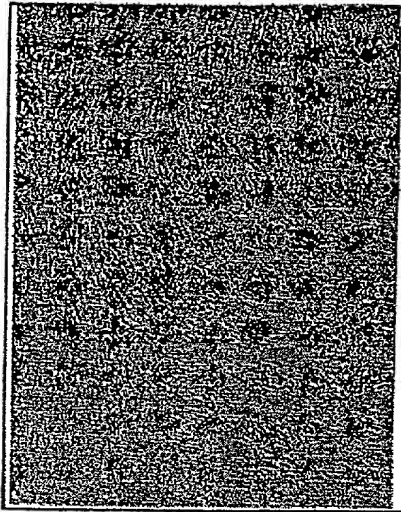


FIG.4

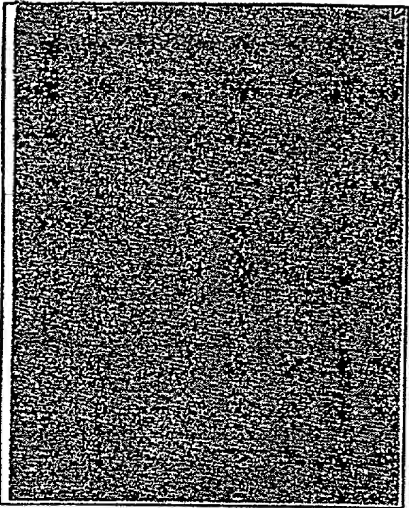
A
H-3
+MK



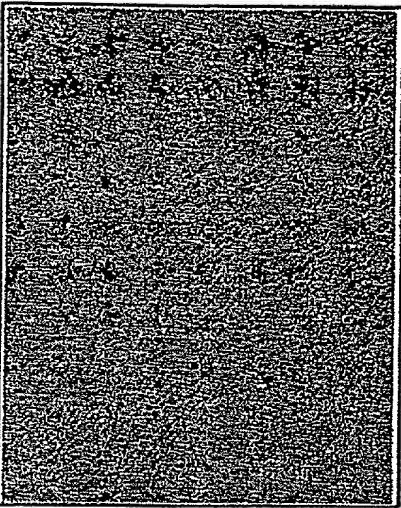
D
H3hIL6
+MK



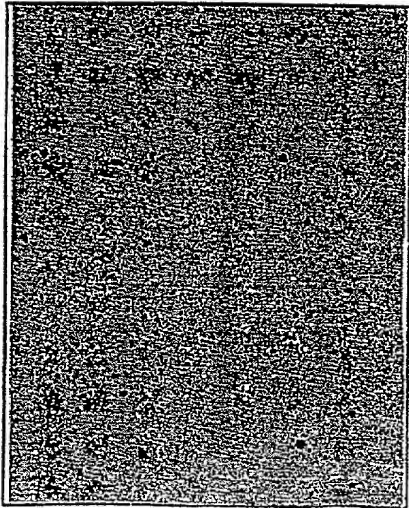
B
H3



E
H3hI
L6



C
MK



F
MK

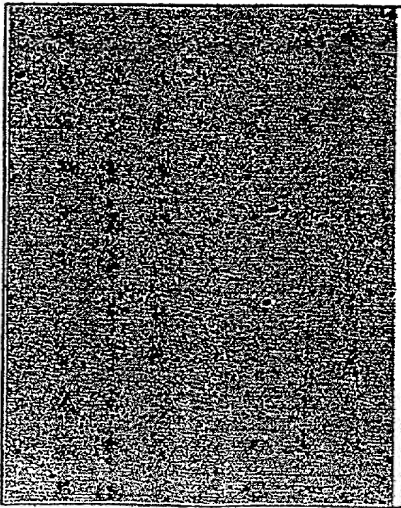
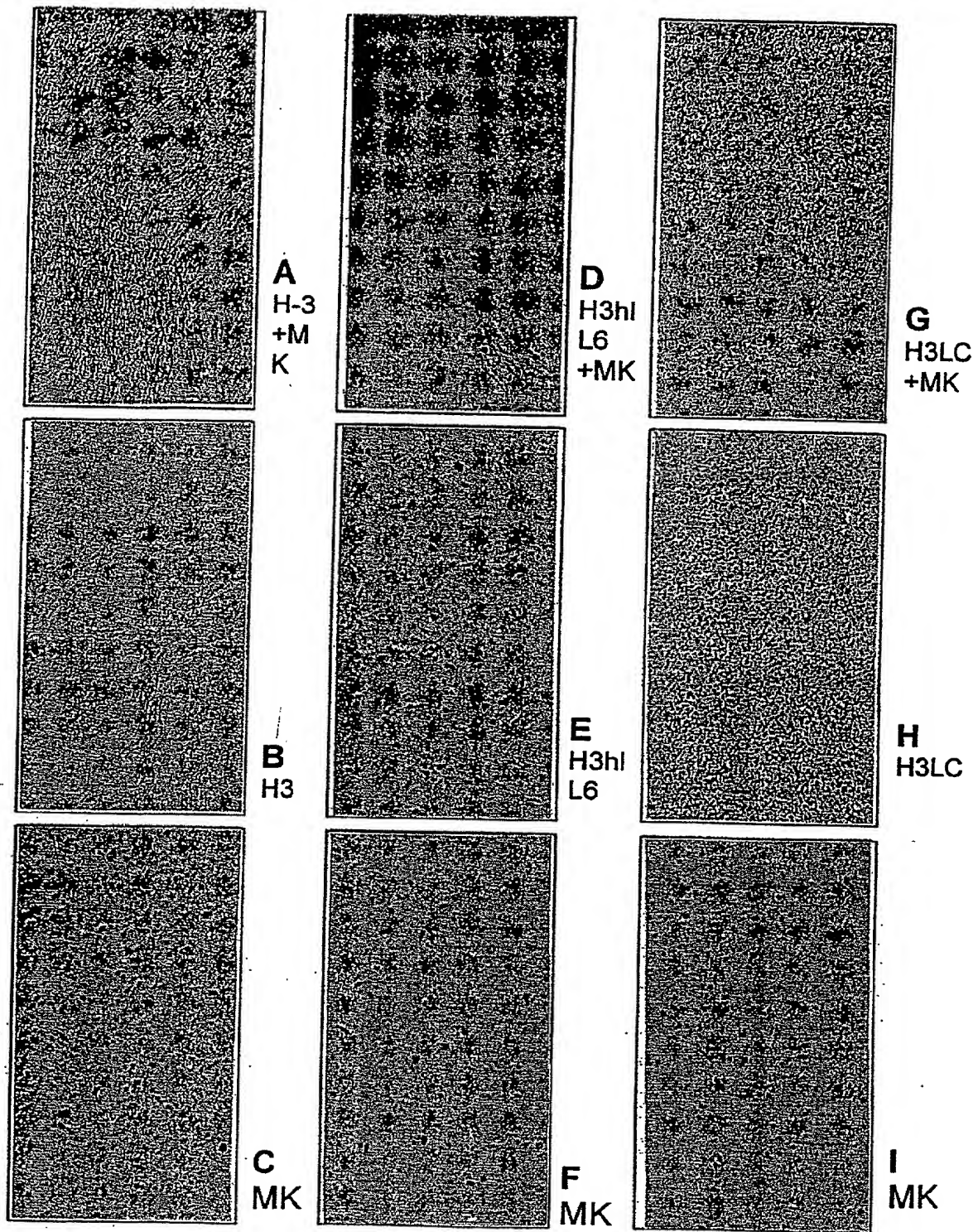


FIG.5

5wk

0957458-092101

- 8/56 -



2wk

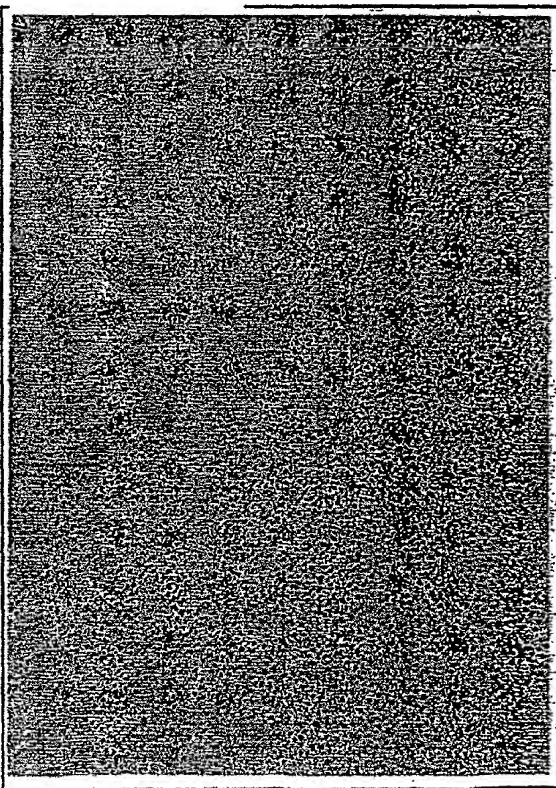
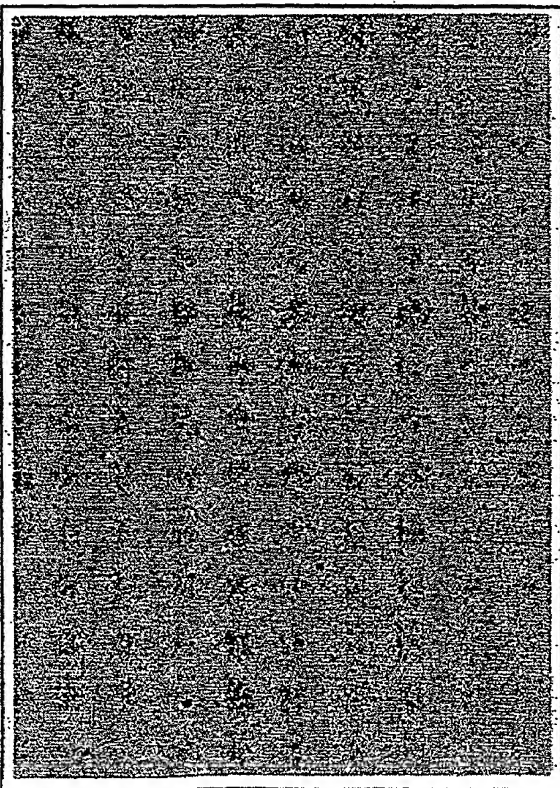
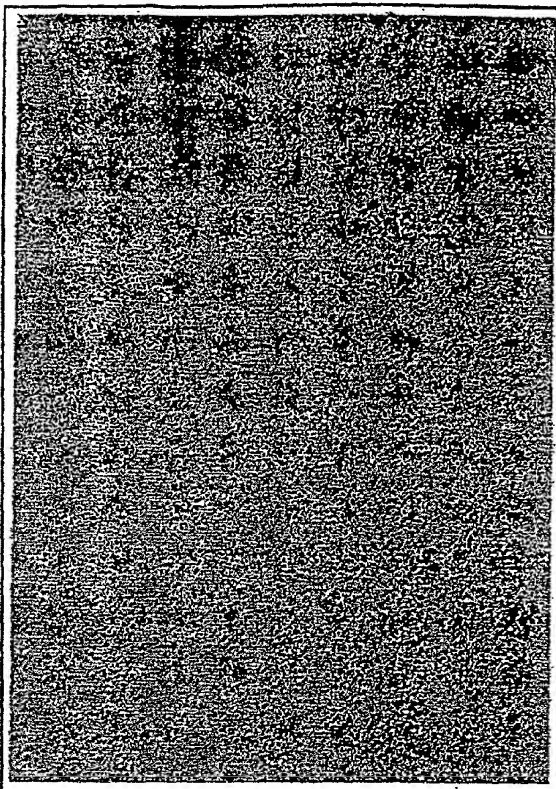
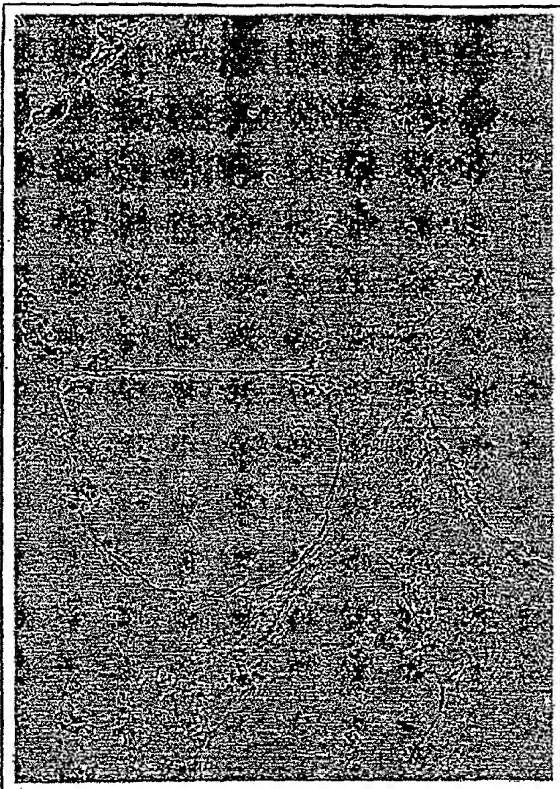
FIG.6

09957458 092101

A.MK(MK+H3-GFP)

- 9/56 -

B.H3-GFP(MK+H3-GFP)



C.MK alone

D.H3-GFP alone

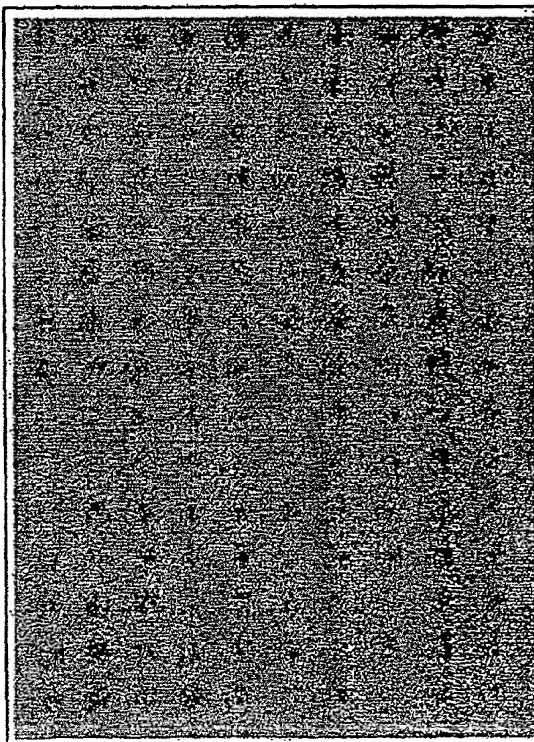
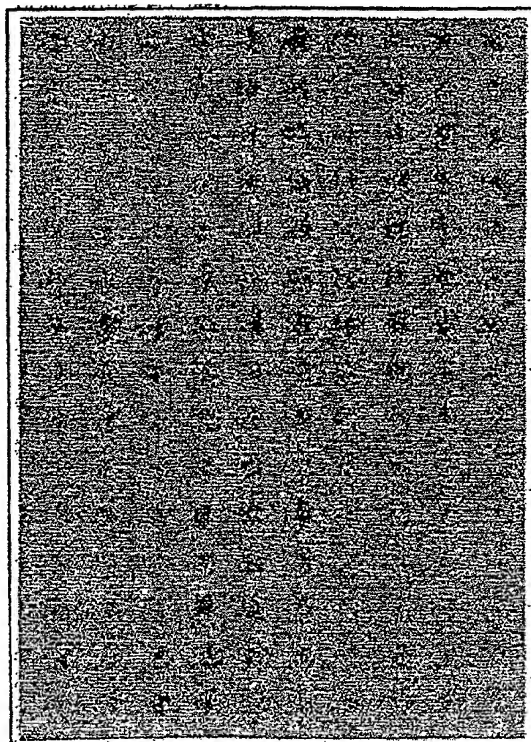
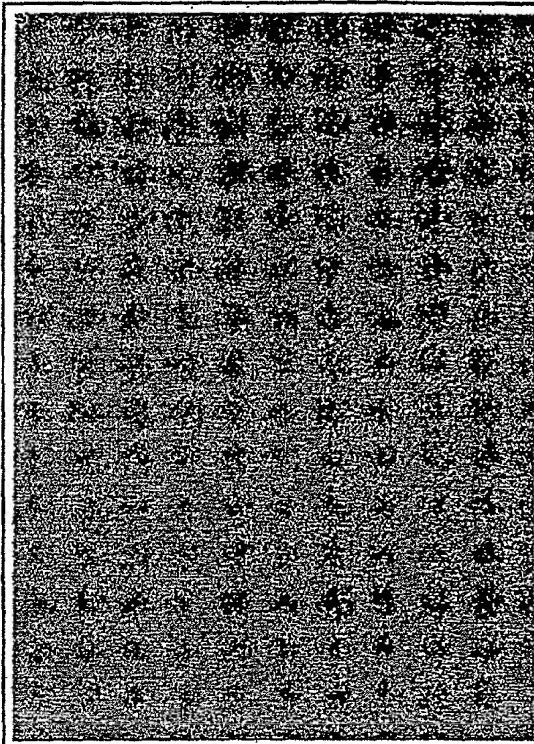
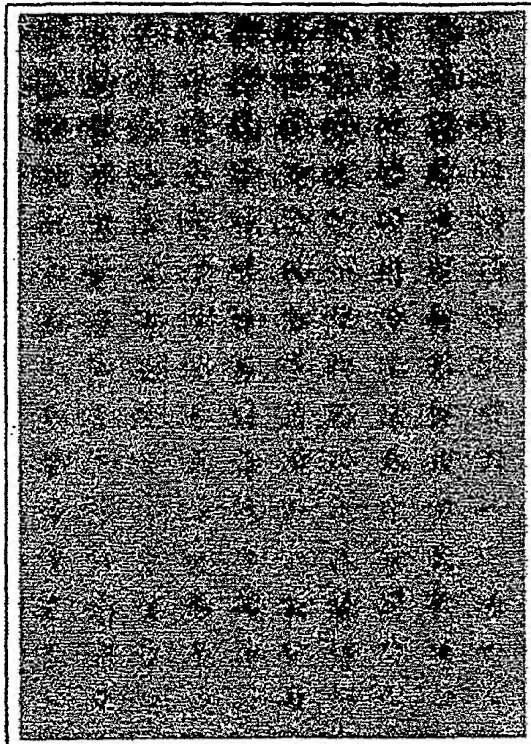
FIG.7

0957458-092101

- 10/56 -

A.MK (MK+H3-GFP-hIL6)

B.H3-GFP-hIL6(MK+H3-GFP-hIL6)



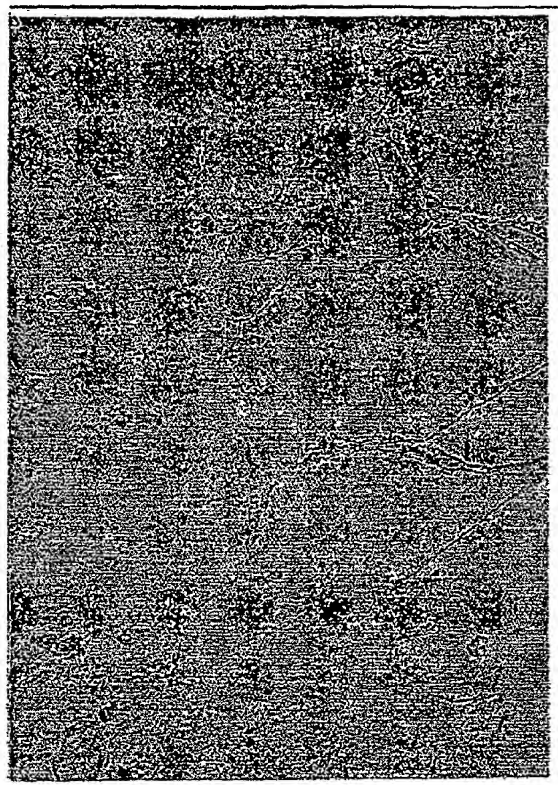
C.MK alone

D.H3-GFP-hIL6 alone

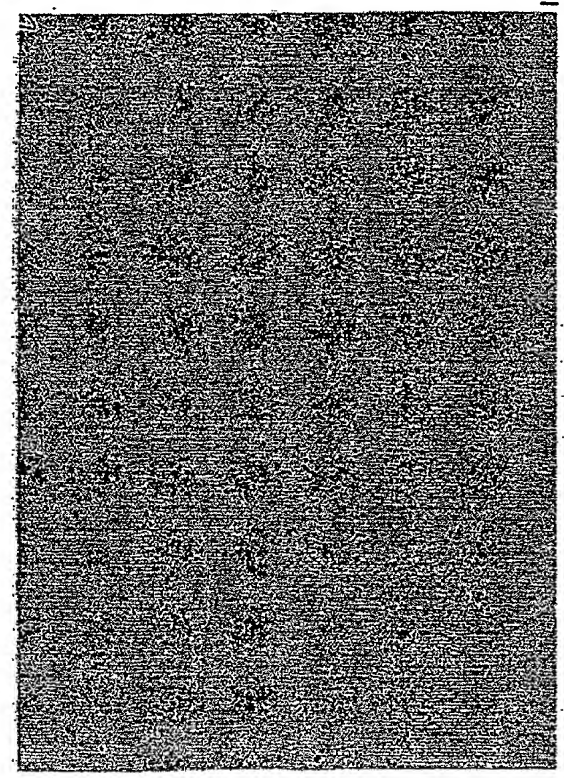
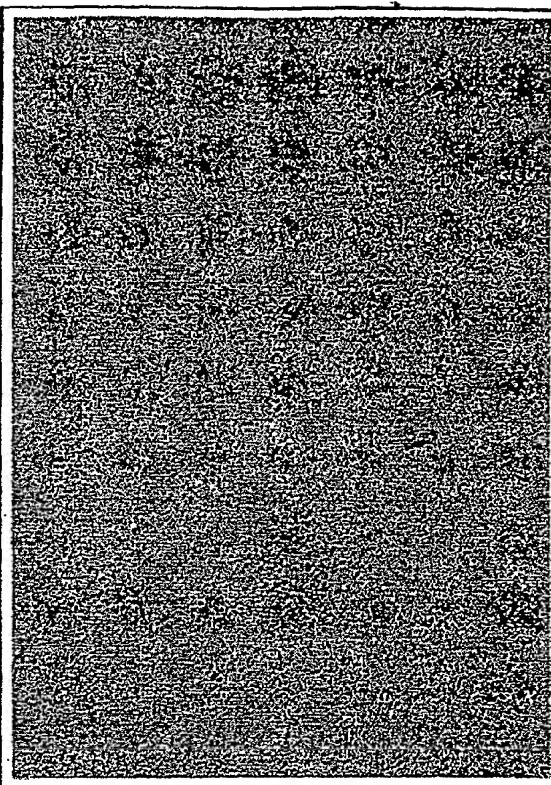
FIG.8

0957458 092101
"07260" 85475660

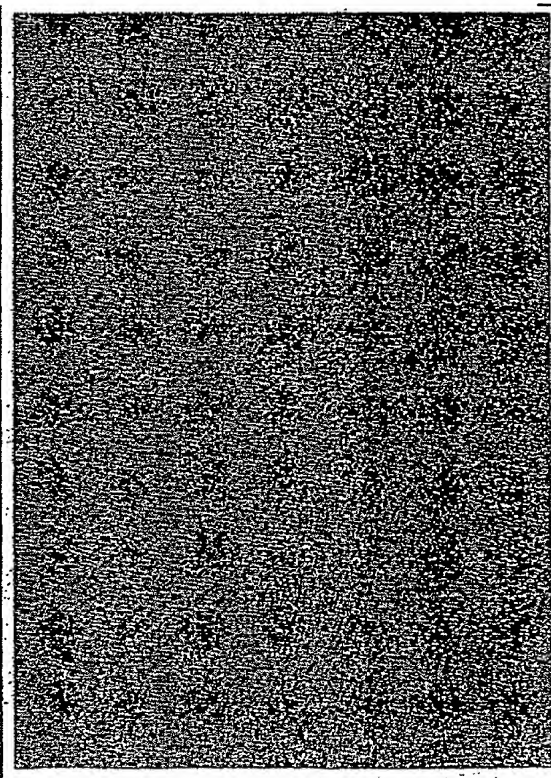
A.MK (MK+H3-LC)



B.H3-LC (MK+H3-LC)



C.MK alone



D.H3-LC alone

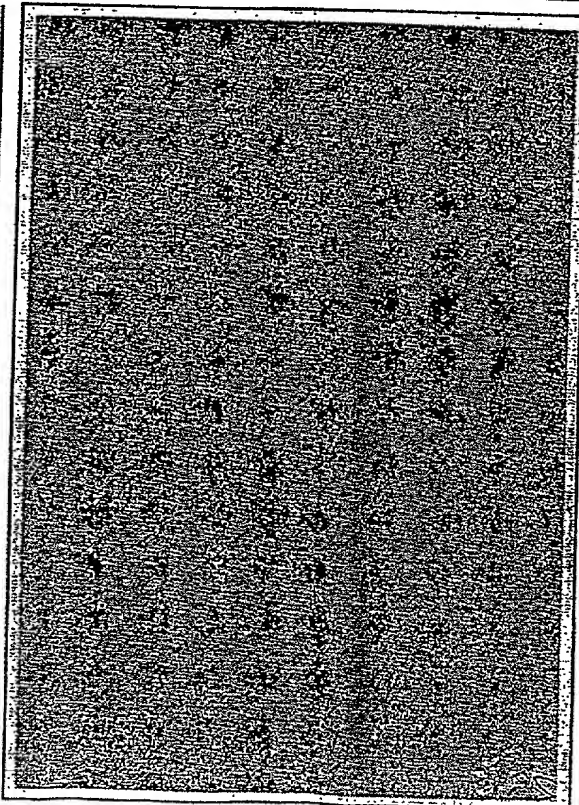
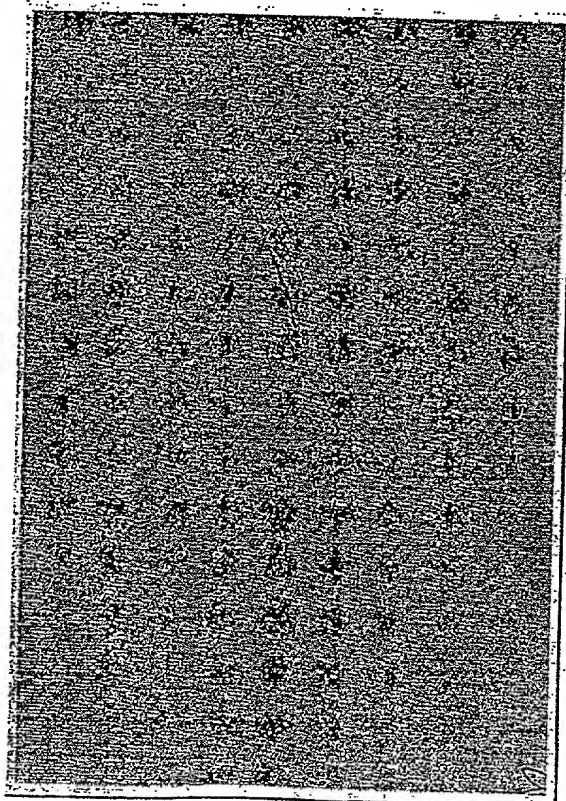
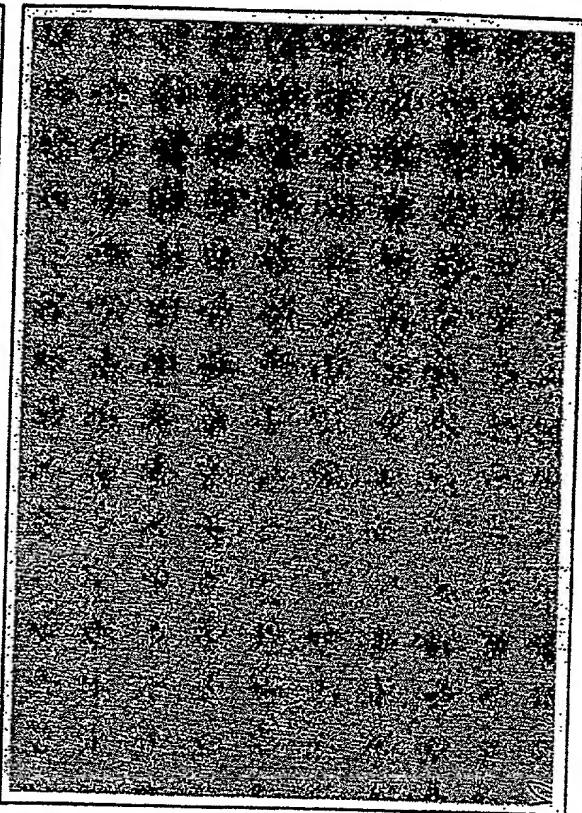
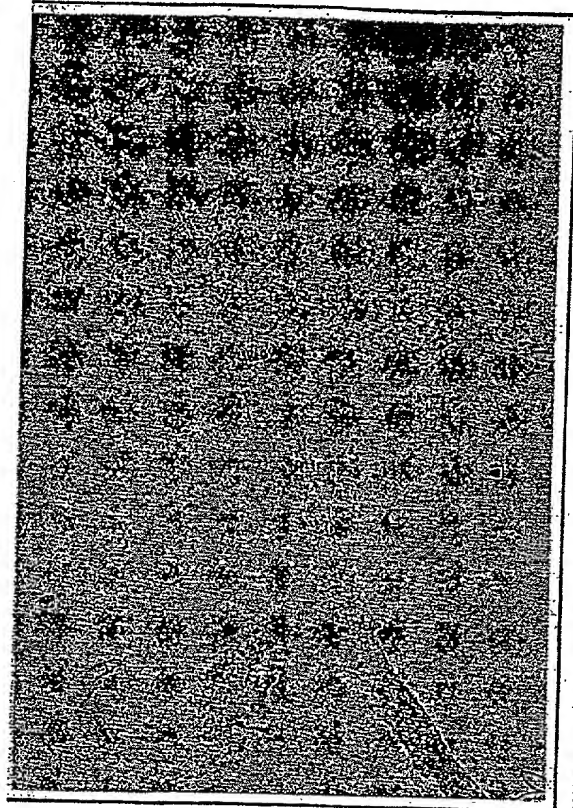
FIG.9

0957458 092101
T01260 854/5660

A. Sk (Sk+H3-GFP)

- 12/56 -

B. H3-GFP (Sk+H3-GFP)



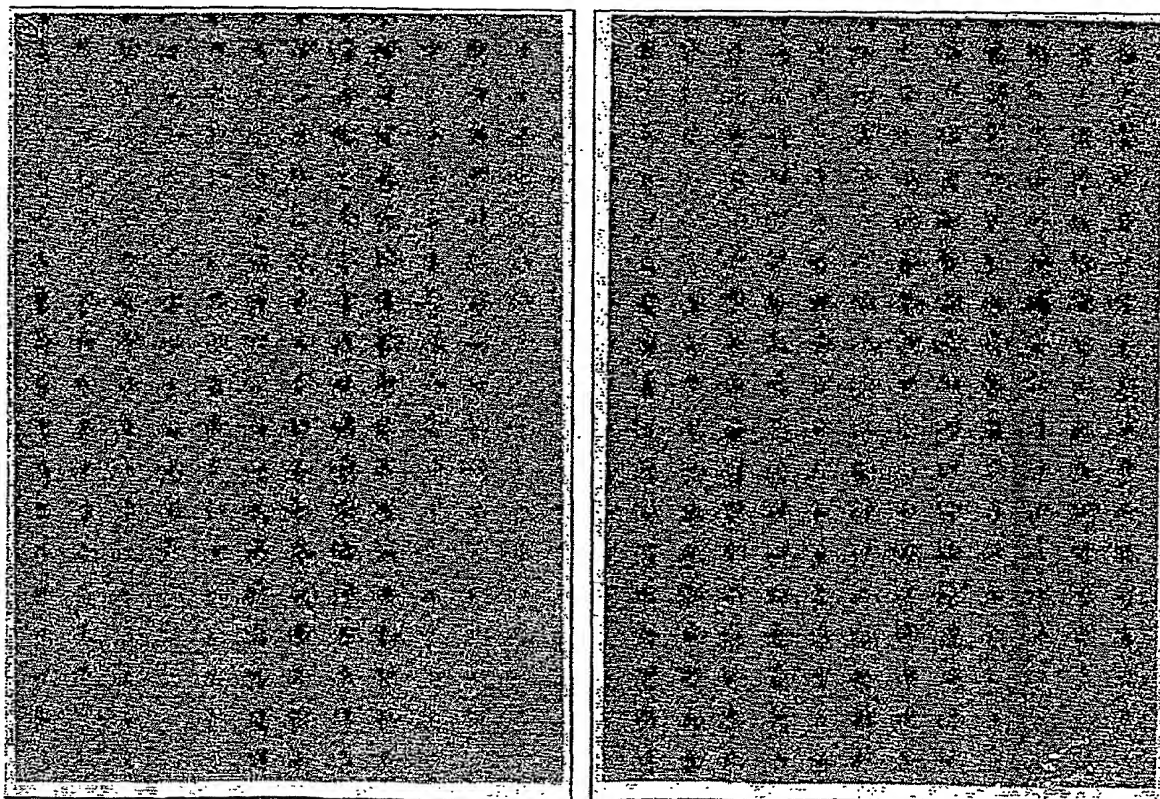
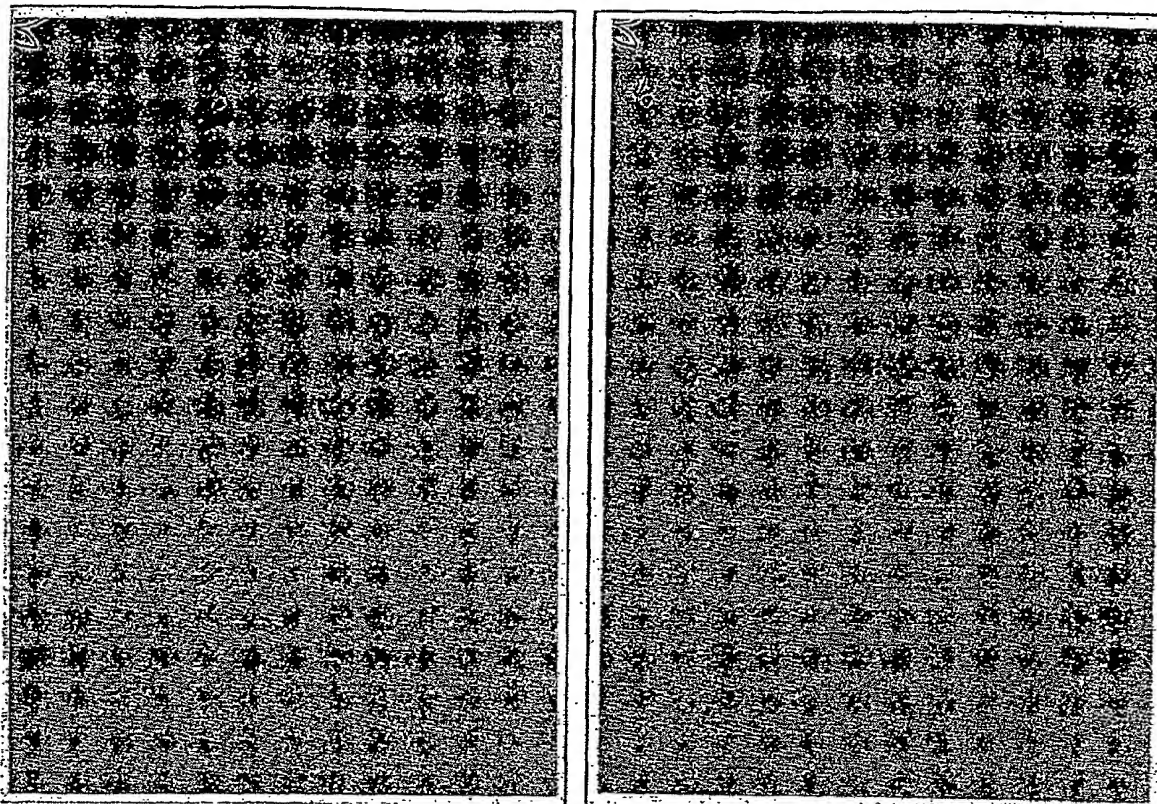
C. Sk alone

D. H3-GFP alone

FIG.10

09957458 09210
" 854/5660"

A. SK (Sk+H3-GFP-hIL6) - 13/56 - B. H3-GFP-hIL6 (Sk+H3-GFP-hIL6)



C. Sk alone

FIG.11

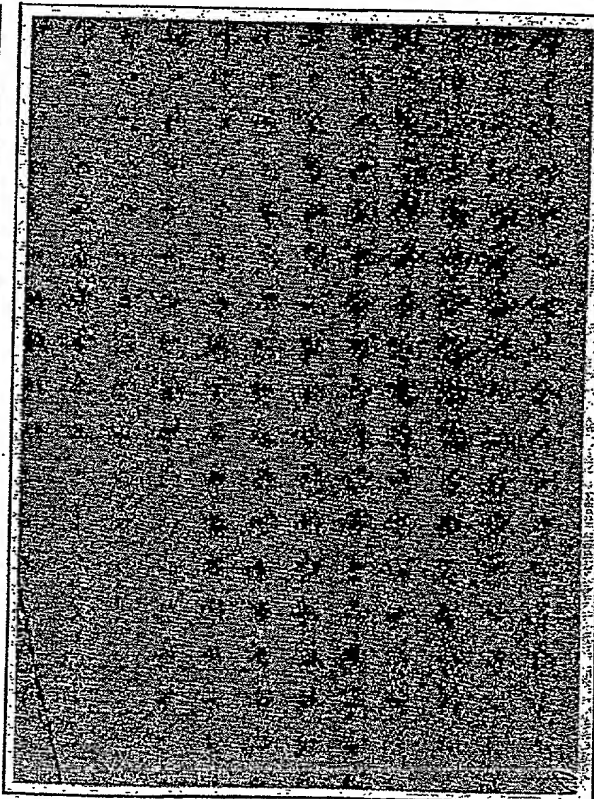
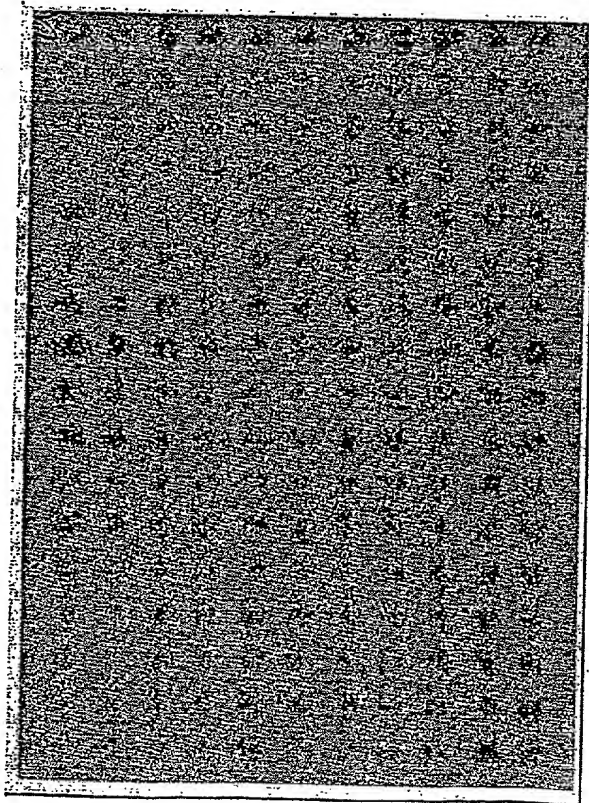
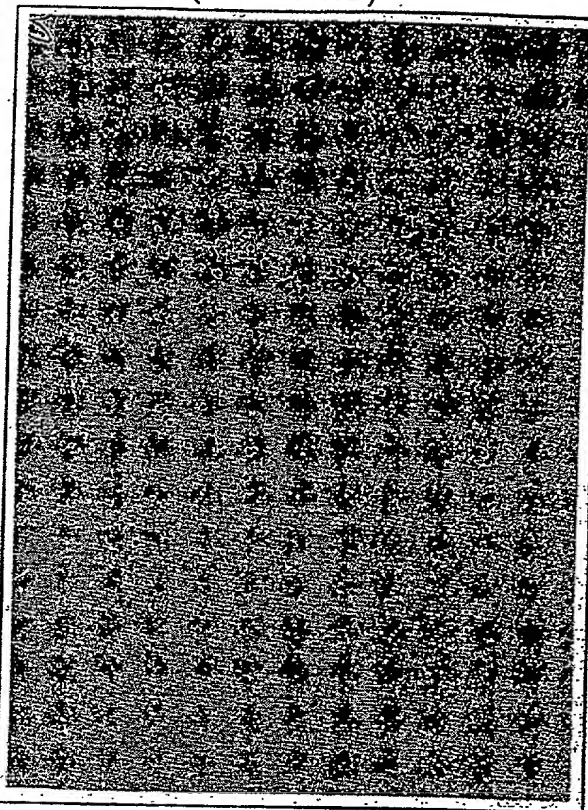
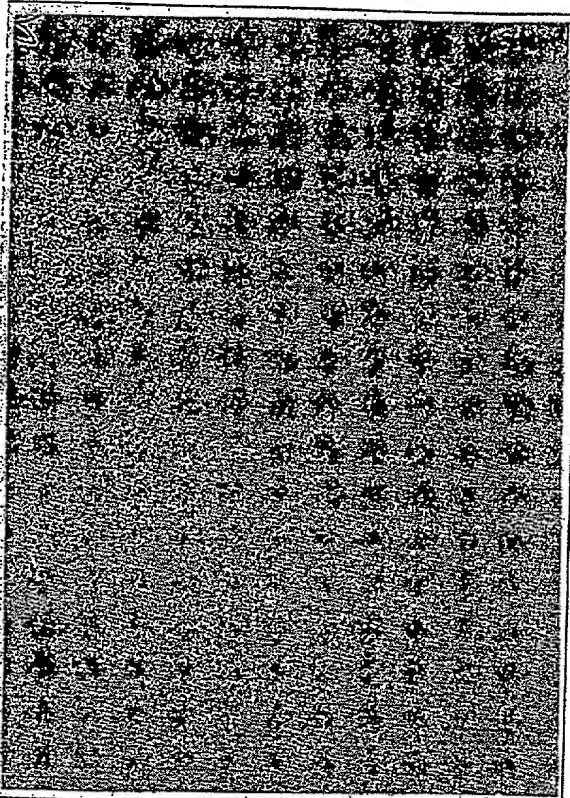
D.H3-GFP-hIL6 alone

0957458-092101

A. Sk (Sk+H3-LC)

- 14/56 -

B. H3-LC (Sk+H3-LC)



C. Sk alone

D. H3-LC alone

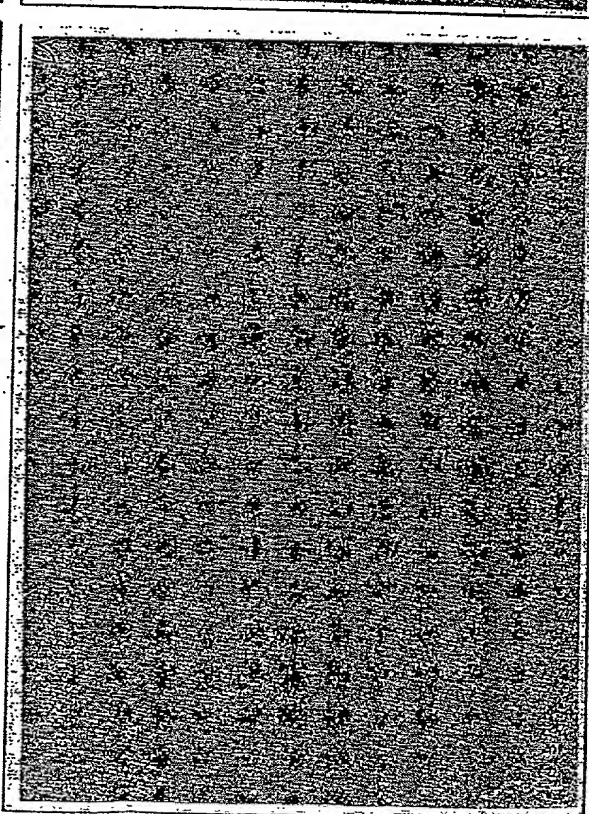
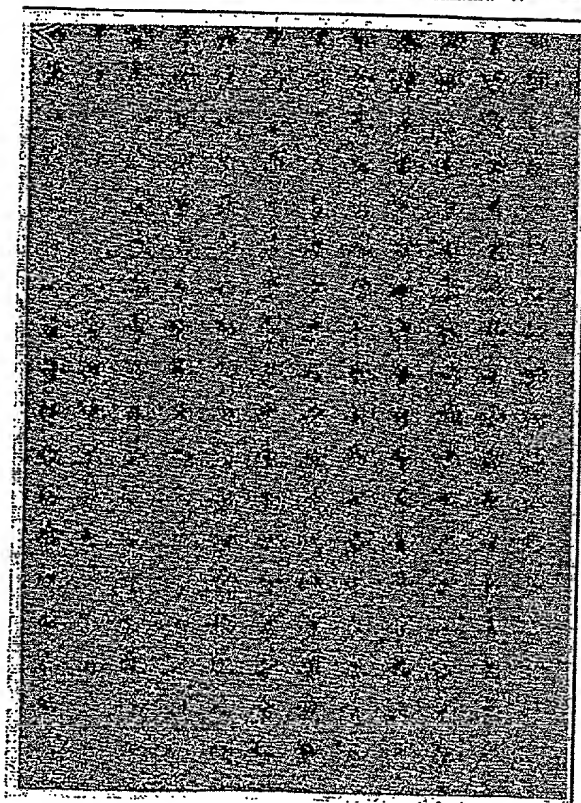
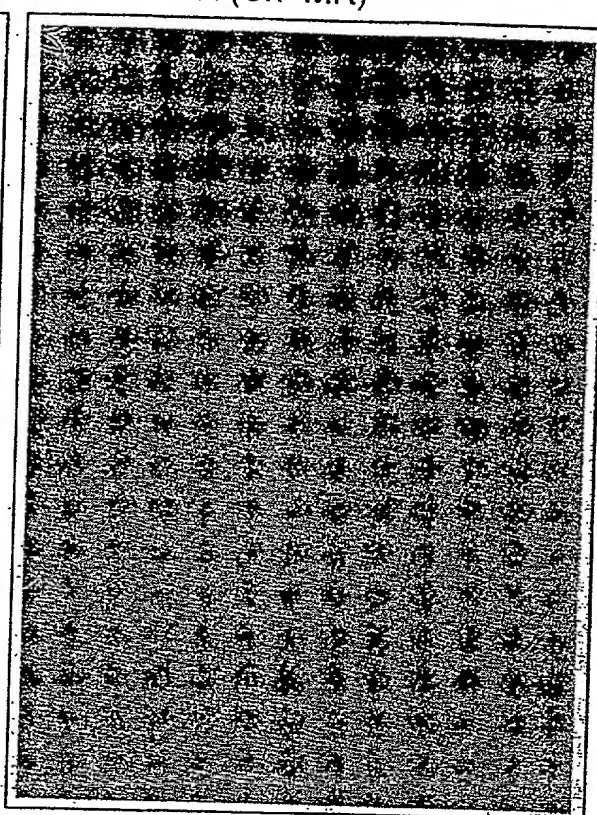
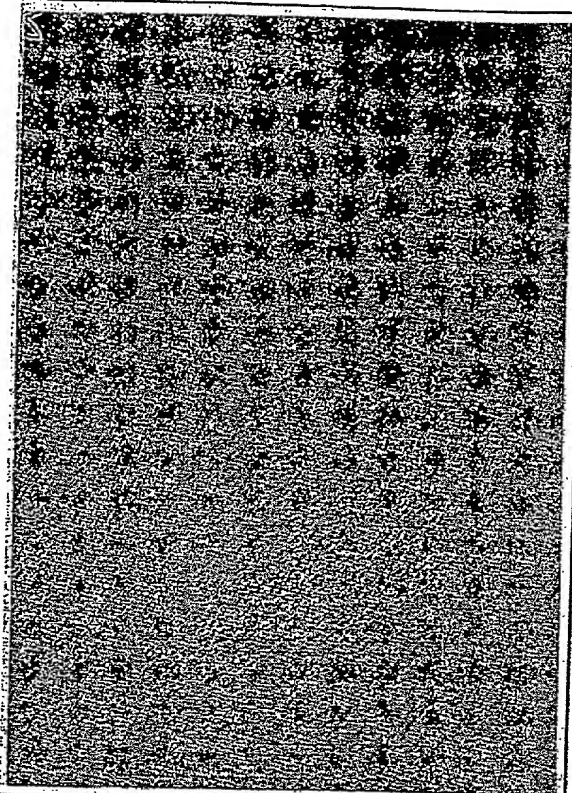
FIG.12

09957458-092101

A. Sk (Sk+MK)

- 15/56 -

B. MK (Sk+MK)



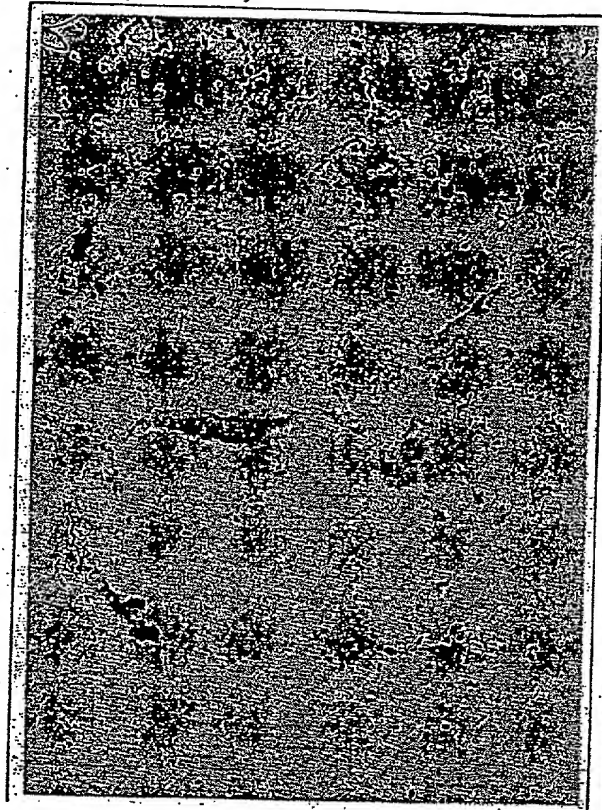
C. Sk alone

D. MK alone

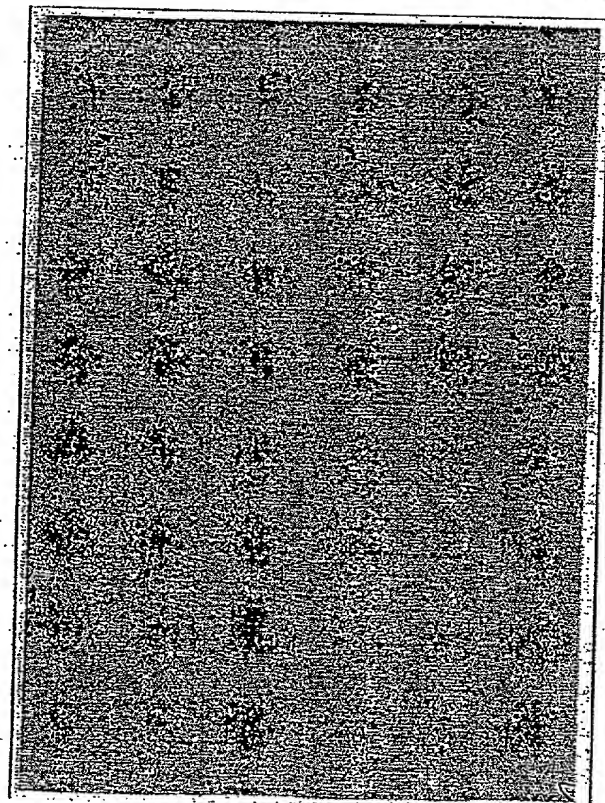
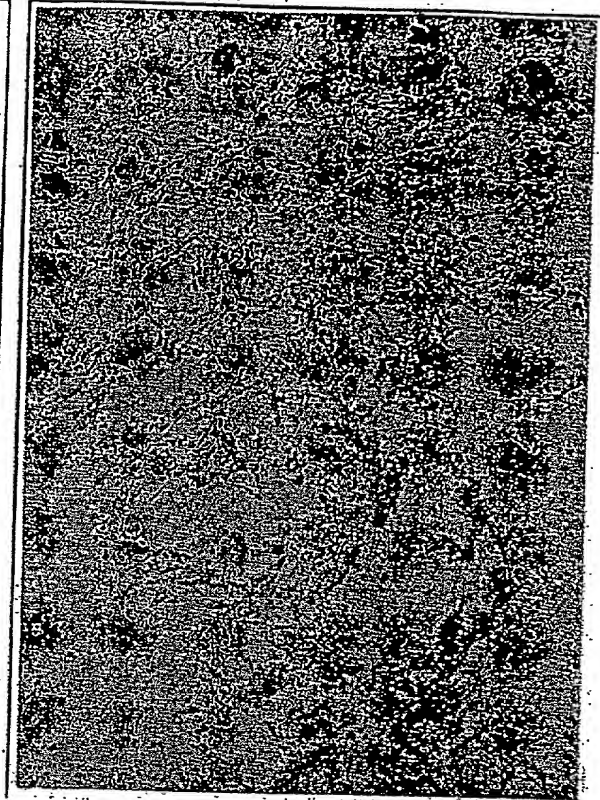
FIG.13

0937458 0910
"101260" 854/5660

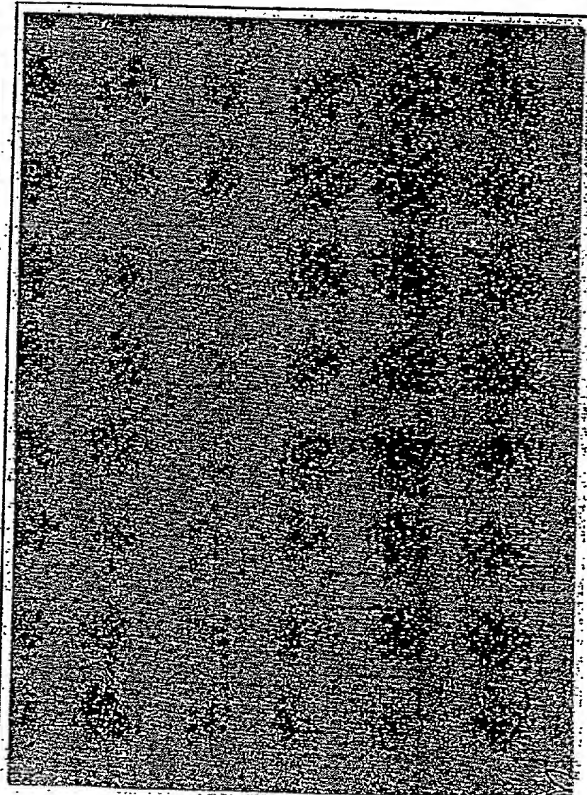
A. Lg (Lg+L14)



B. L14 (Lg+L14)



C. Lg alone



D. L14 alone

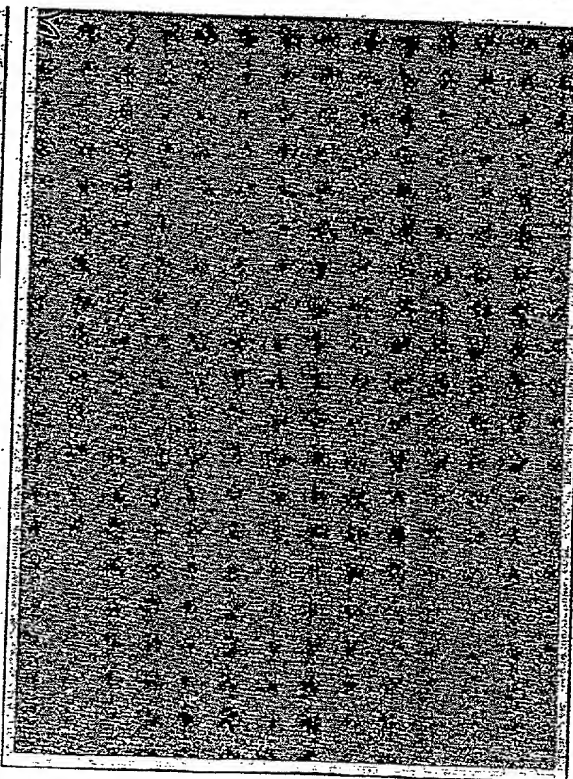
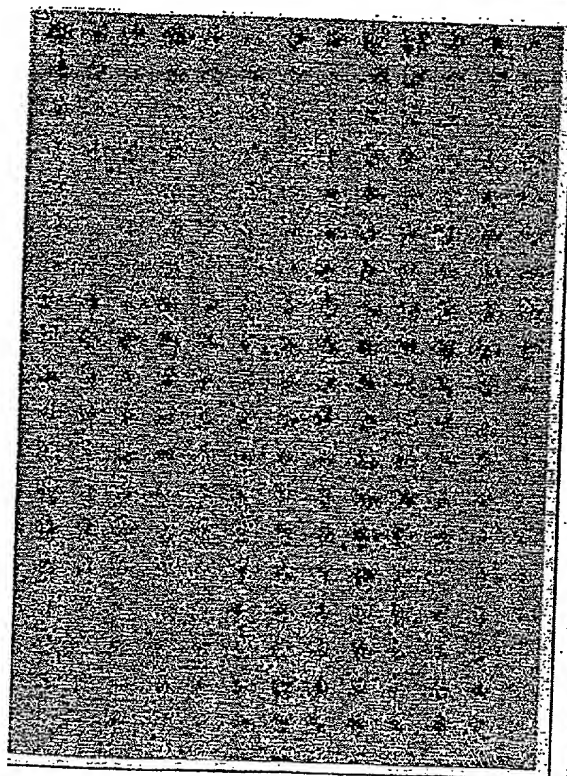
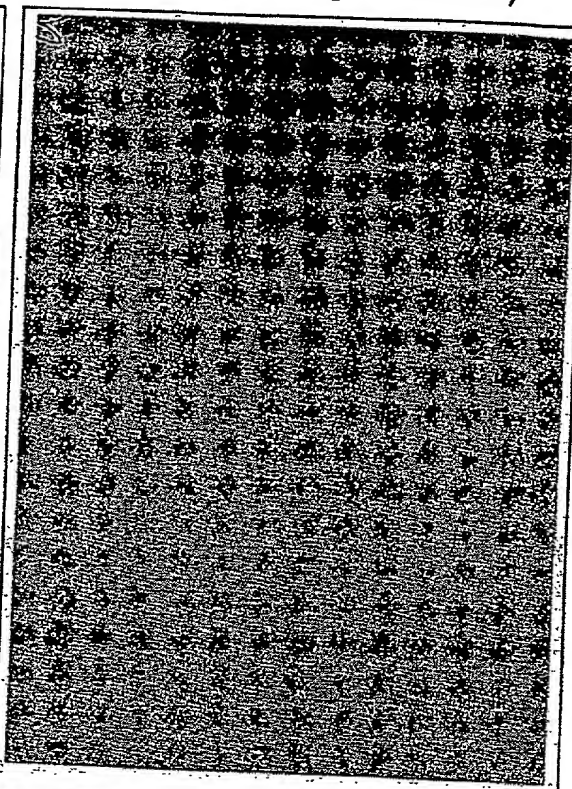
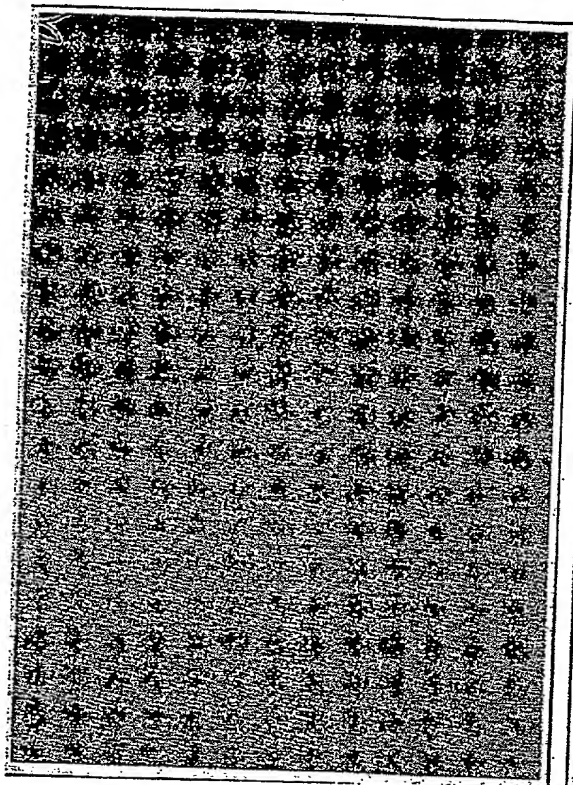
FIG. 14

0957458-092101

A. Lg (Lg+L14-hiL3)

- 17/56 -

B. L14-hiL3 (Lg+L14-hiL3)



C. Lg alone

D. L14-hiL3 alone

FIG.15

099545 854/5660

- 18/56 -

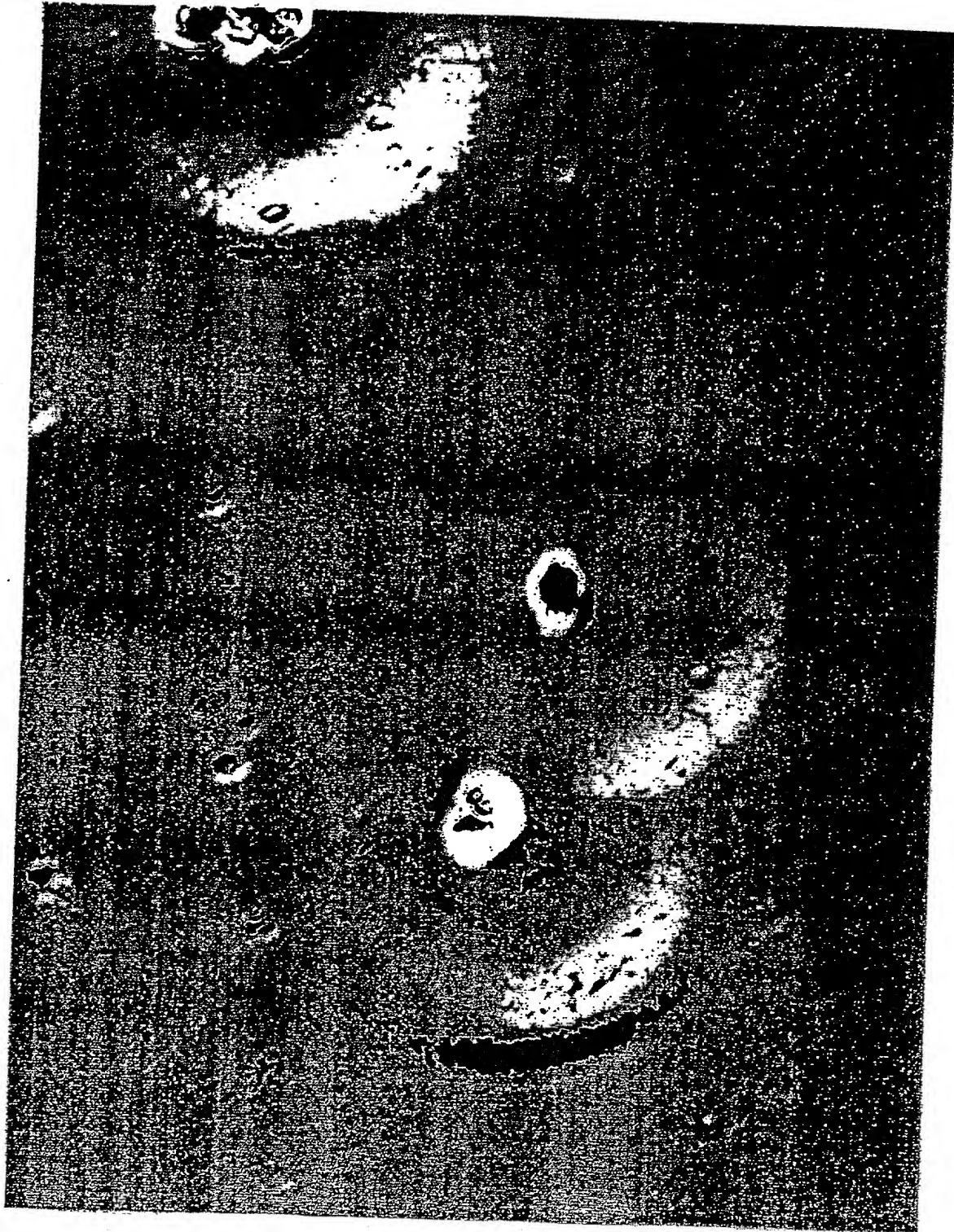


FIG.16

09957458, 092101

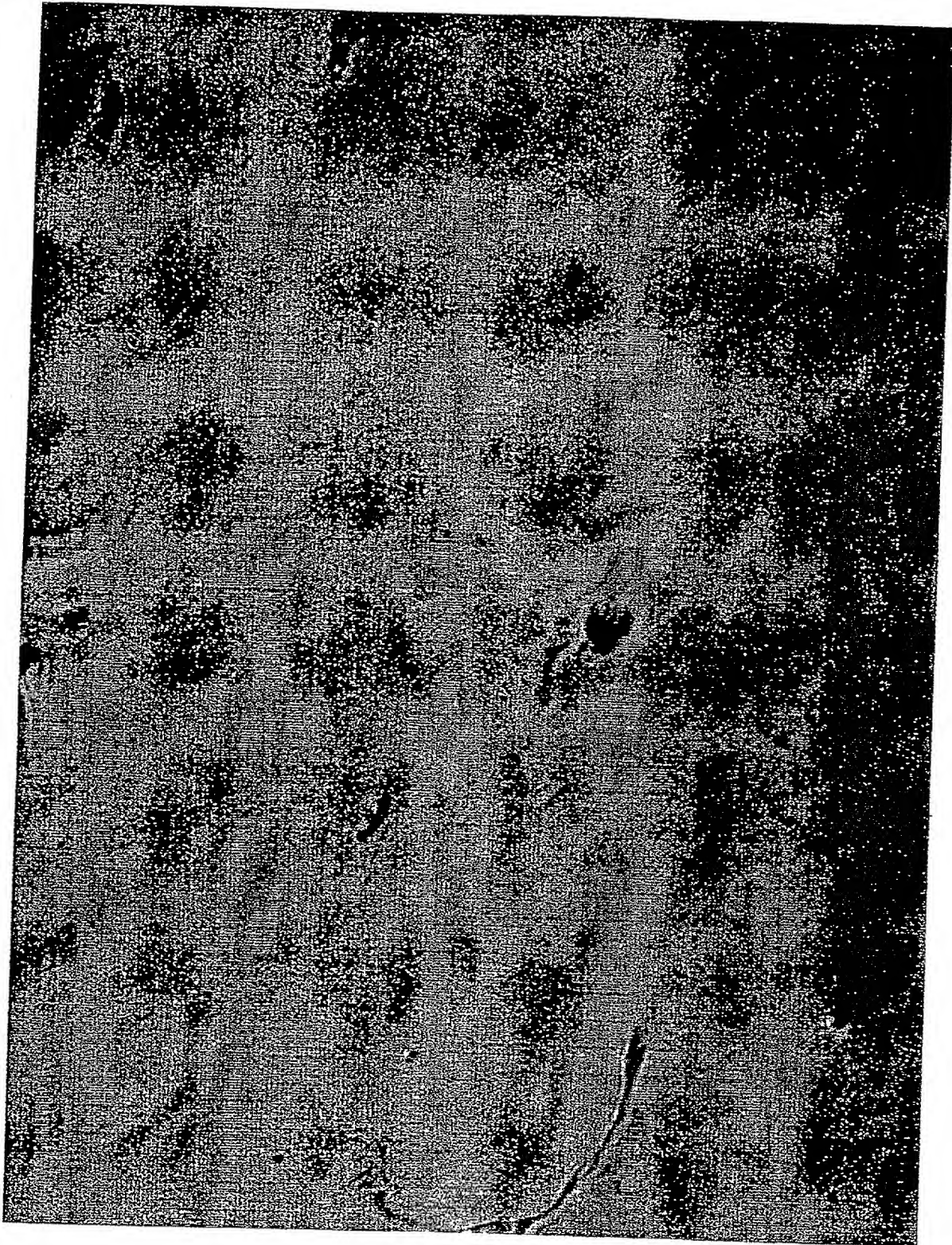


Fig. 17.

09957458, 092101

Length: 7969 July 22, 1999

1 GCTAGCGATT TAGGTGACAC TATAGAATAG ATCtcgacnn nGTCACCCCT
 51 AGAGTCGAGC TGTGACGGTC CTTACAATGA AATGCANCTG GGTATCTTC
 101 TTCCTGATGG CAGGGGTTAC AGGTAAGGGG CTCCCAAGTC CCAAACCTGA
 151 GGGTCCATAA ACTCTGTGAC AGTGGCAATC ACTTTGCCTT TCTTTCTACA
 201 GGGGTGAATT CGGCTTTCAC AGAGCATTCA CCGCTGACCC CTCACCGTCG
 251 GGACCTCTGT AGCCGCTCTA TCTGGCTAGC AAGGAAGATT CGTTCAGACC
 301 TTGACTGCTC TTACGGAATC CTATGTAAGT TGCCTATTTT GCTGTTATCT
 351 GTTTTCCCTT CATCTTTTTT GATCCAGCAA CTTACCATCA CGCATCAGCT
 401 CCATTACCAA TTGTGAAAGC TCTAATCATA TAGTCATTCA TATAGGTTAT
 451 TTGACATGGG CCCTTCCCTT GAGGAAACCC ATGTGACTTT ATTTTCTTCC
 501 TCTGGGCTGT TTAGGAGATG AAGTTACTTG AATGAGAAAA TATATATGGA
 551 GTTCTAGAAA GGATTGGTTT ATATGTCTTG GAGGCTATTT CAAAATTTAT
 601 TTGGCCATAT ATTCTGAATA CTACCTAGAA CAGATTAGCC ATGGGCCCTN
 651 TGGGTINTTC ATAAGCCATT GTTCTGAANT TTTTATAGCTT TGTAAATGAA
 701 AGGTTTATGG GATAGGAAGA GTNCTATGAA CGTGGGAGGA ATTTGTAAAT
 751 CCTACCAATT TNTNCTATAT AGCATTAGCC CCCACCTTTT ANTATTCTGC
 801 ATCAAAAGTA AGATTGTGTC TAAAGAGAAA GGTNAGCTAT CAAAAGGACT
 851 CCTATAANAT TCNTTGGAAA CTTNTGGAAN TGTCAAATTT NTTTGAGCTA
 901 ATTNTTGGAG TTCCAAANTT TGTCTTNTNA CAGTNAAGGG GGANCCCCAT
 951 TCANATTTNC CCCCCNNNG ANAATGCTTG GGGGAAAAAA CCTNCCAACC
 1001 CCNTTGTGGG ANGAAGTTTT TTTAANNNTT TAAGGCTNGN NGAAACNNGN
 1051 TTTTAATTTT TTGGGNCNAN CGCCTNTCCC CGGTACCAGG AAAATCAGGA
 1101 CCTNTTTTTG GGGNNGNGCN CCNACNGGGG GGNAAAANGG GAAATTTCTN
 1151 CANAAAAAAT CTTTTCCGnn nnnngtgaag catcagggcc tgaacaagaa
 1201 catcaacctg gactctgcgg atgggatgcc agtggcaagc actgatcagt
 1251 ggagtgagct gaccgaggca gagcgactcc aagagaacct tcaagcttat

1301 cgtaccttcc atgttttgtt ggccaggctc ttagaagacc agcagggtgca
1351 ttttacccca accgaaggtg acttccatca agctatacat acccttcttc
1401 tccaagtcgc tgcctttgca taccagatag aggagttaat gatactcctg
1451 gaatacaaga tcccccgcaa tgaggctgat gggatgccta ttaatgttgg
1501 agatggtggt ctctttgaga agaagctgtg gggcctaaag gtgctgcagg
1551 agctttcaca gtggacagta aggtccatcc atgaccttcg tttcatttct
1601 tctcatcaga ctgggatccc agcacgtggg agccattata ttgctaacaa
1651 caagaaaatg tagnnnnngc ggccTGC GCC GTCTTTCCCG ACGTTAAAGG
1701 GATGAAACCA CAAGACTTAC CTTGCTCGG AAGTAAAACG ACAAACACAC
1751 ACAGTTTTGC CCGTTTTTCAT GAGAAATGGG ACGTCTGCGC ACGAAACGCG
1801 CCGTCGCTTG AGGAGGACTT GTACAAACAC GATCTATGCA GGTTCCTCCA
1851 ACTGACACAA ACCGTGCAAC TTGAAACTCC GCCTGGTCTT TCCAGGTCTA
1901 GAGGGGTAAAC ATTTTGTACT GTGTTTGA CTACGCTCGA TCCACTAGCG
1951 AGTGTTAGTA GCGGTACTGC TGTCTCGTAG CGGAGCATGT TGGCCGTGGG
2001 AACACCTCCT TGGTAACAAG GACCCACGGG GCCGAAAGCC ATGTCCTAAC
2051 GGACCCAACA TGTGTGCAAC CCCAGCACGG CAGCTTTACT GTGAAACCCA
2101 CTTCAAGGTG ACATTGATAC TGGTACTCAA AACTGGTGA CAGGCTAAGG
2151 ATGCCCTTCA GGTACCCCGA GGTAACAAGC GACACTCGGG ATCTGAGAAG
2201 GGGACTGGGA CTTCTTTAAA GTGCCCAGTT TAAAAGCTT CTACGCCTGA
2251 ATAGGTGACC GGAGGCCGGC ACCTTTCCTT TTATAACCAC TGAACACATG
2301 GAAGACGCCA AAAACATAAA GAAAGGCCCG GCGCCATTCT ATCCTCTAGA
2351 GGATGGAACC GCTGGAGAGC AACTGCATAA GGCTATGAAG AGATACGCCC
2401 TGGTTCCTGG AACAATTGCT TTTACAGATG CACATATCGA GGTGAACATC
2451 ACGTACGCGG AATACTTCGA AATGTCCGTT CGGTTGGCAG AAGCTATGAA
2501 ACGATATGGG CTGAATACAA ATCACAGAAT CGTCGTATGC AGTGAAACT
2551 CTCTTCAATT CTTTATGCCG GTGTTGGGCG CGTTATTTAT CGGAGTTGCA
2601 GTTGCGCCCC CGAACGACAT TTATAATGAA CGTGAATTGC TCAACAGTAT
2651 GAACATTTCTG CAGCCTACCG TAGTGTTTGT TTCCAAAAG GGGTTGCAAA

2701 AAATTTTGAA CGTGCAAAAA AAATTACCAA TAATCCAGAA AATTATTATC
2751 ATGGATTCTA AAACGGATTA CCAGGGATTT CAGTCGATGT ACACGTTTCGT
2801 CACATCTCAT CTACCTCCCG GTTTTAATGA ATACGATTTT GTACCAGAGT
2851 CCTTTGATCG TGACAAAACA ATTGCACTGA TAATGAATTC CTCTGGATCT
2901 ACTGGGTTAC CTAAGGGTGT GGCCCTTCCG CATAGAACTG CCTGCGTCAG
2951 ATTCTCGCAT GCCAGAGATC CTATTTTTGG CAATCAAATC ATTCCGGATA
3001 CTGCGATTTT AAGTGTTGTT CCATTCCATC ACGGTTTTGG AATGTTTACT
3051 ACACTCGGAT ATTTGATATG TGGATTTCTGA GTCGTCTTAA TGTATAGATT
3101 TGAAGAAGAG CTGTTTTTAC GATCCCTTCA GGATTACAAA ATTCAAAGTG
3151 CGTTGCTAGT ACCAACCCTA TTTTCATTCT TCGCCAAAAG CACTCTGATT
3201 GACAAATACG ATTTATCTAA TTTACACGAA ATTGCTTCTG GGGGCGCACC
3251 TCTTTCGAAA GAAGTCGGGG AAGCGGTTGC AAAACGCTTC CATCTTCCAG
3301 GGATACGACA AGGATATGGG CTCACTGAGA CTACATCAGC TATTCTGATT
3351 ACACCCGAGG GGGATGATAA ACCGGGCGCG GTCGGTAAAG TTGTTCCATT
3401 TTTTGAAGCG AAGGTTGTGG ATCTGGATAC CGGGAAACG CTGGGCGTTA
3451 ATCAGAGAGG CGAATTATGT GTCAGAGGAC CTATGATTAT GTCCGGTTAT
3501 GTAAACAATC CGGAAGCGAC CAACGCCTTG ATTGACAAGG ATGGATGGCT
3551 ACATTCTGGA GACATAGCTT ACTGGGACGA AGACGAACAC TTCTTCATAG
3601 TTGACCGCTT GAAGTCTTTA ATTAAATACA AAGGATATCA GGTGGCCCCC
3651 GCTGAATTGG AATCGATATT GTTACAACAC CCCAACATCT TCGACGCGGG
3701 CGTGGCAGGT CTTCCCGACG ATGACGCCGG TGAACCTCCC GCCGCCGTTG
3751 TTGTTTTGGA GCACGGAAAG ACGATGACGG AAAAAGAGAT CGTGGATTAC
3801 GTCGCCAGTC AAGTAACAAC CGCGAAAAAG TTGCGCGGAG GAGTTGTGTT
3851 TGTGGACGAA GTACCGAAAG GTCTTACCGG AAAACTCGAC GCAAGAAAAA
3901 TCAGAGAGAT CCTCATAAAG GCCAAGAAGG GCGGAAAGTC CAAATTGTAA
3951 AATGTAAGT TATTTCAGCGA TGACGAAATT CTTAGCTATT GTAATGACTC
4001 TAGAGGATCT TTGTGAAGGA ACCTTACTTC TGTGGTGTGA CATAATTGGA
4051 CAAACTACCT ACAGAGATTT AAAGCTCTAA GGTAAATATA AAATTTTTAA

4101 GTGTATAATG TGTTAAACTA CTGATTCTAA TTGTTTGTGT ATTTTAGATT
4151 CCAACCTATG GAACTGATGA ATGGGAGCAG TGGTGGAATG CCTTTAATGA
4201 GGAAAACCTG TTTTGCTCAG AAGAAATGCC ATCTAGTGAT GATGAGGCTA
4251 CTGCTGACTC TCAACATTCT ACTCCTCCAA AAAAGAAGAG AAAGGTAGAA
4301 GACCCCAAGG ACTTTCCTTC AGAATTGCTA AGTTTTTTGA GTCATGCTGT
4351 GTTTAGTAAT AGAACTCTTG CTTGCTTTGC TATTTACACC ACAAAGGAAA
4401 AAGCTGCACT GCTATACAAG AAAATTATGG AAAAATATTC TGTAACCTTT
4451 ATAAGTAGGC ATAACAGTTA TAATCATAAC ATACTGTTTT TTCTTACTCC
4501 ACACAGGCAT AGAGTGTCTG CTATTAATAA CTATGCTCAA AAATTGTGTA
4551 CCTTTAGCTT TTTAATTTGT AAAGGGGTTA ATAAGGAATA TTTGATGTAT
4601 AGTGCCTTGA CTAGAGATCA TAATCAGCCA TACCACATTT GTAGAGGTTT
4651 TACTTGCTTT AAAAAACCTC CCACACCTCC CCCTGAACCT GAAACATAAA
4701 ATGAATGCAA TTGTTGTTGT TAACTTGTTT ATTGCAGCTT ATAATGGTTA
4751 CAAATAAAGC AATAGCATCA CAAATTTCAC AAATAAAGCA TTTTTTTCAC
4801 TGCATTCTAG TTGTGGTTTG TCCAAACTCA TCAATGTATC TTATCATGTC
4851 TGGATCCCCG GGTCCCTATA GTGAGTCGTA TTAGCTTGGC GTAATCATGG
4901 TCATAGCTGT TTCCTGTGTG AAATTGTTAT CCGCTCACA TTCCACACAA
4951 CATACGAGCC GGAAGCATAA AGTGTAAGC CTGGGGTGCC TAATGAGTGA
5001 GCTAACTCAC ATTAATTGCG TTGCGCTCAC TGCCCGCTTT CCAGTCGGGA
5051 AACCTGTCGT GCCAGCTGCA TTAATGAATC GGCCAACGCG CGGGGAGAGG
5101 CGGTTTGCGT ATTGGGCGCT CTTCCGCTTC CTCGCTCACT GACTCGCTGC
5151 GCTCGGTCGT TCGGCTGCGG CGAGCGGTAT CAGCTCACTC AAAGGCGGTA
5201 ATACGGTTAT CCACAGAATC AGGGGATAAC GCAGGAAAGA ACATGTGAGC
5251 AAAAGGCCAG CAAAAGGCCA GGAACCGTAA AAAGGCCGCG TTGCTGGCGT
5301 TTTTCCATAG GCTCCGCCCC CCTGACGAGC ATCACAAAAA TCGACGCTCA
5351 AGTCAGAGGT GGCGAAACCC GACAGGACTA TAAAGATACC AGGCGTTTCC
5401 CCCTGGAAGC TCCCTCGTGC GCTCTCCTGT TCCGACCCTG CCGCTTACCG
5451 GATACCTGTC CGCCTTTCTC CCTTCGGGAA GCGTGGCGCT TTCTCAATGC

5501 TCACGCTGTA GGTATCTCAG TTCGGTGTAG GTCGTTCGCT CCAAGCTGGG
5551 CTGTGTGCAC GAACCCCCCG TTCAGCCCCGA CCGCTGCGCC TTATCCGGTA
5601 ACTATCGTCT TGAGTCCAAC CCGGTAAGAC ACGACTTATC GCCACTGGCA
5651 GCAGCCACTG GTAACAGGAT TAGCAGAGCG AGGTATGTAG GCGGTGCTAC
5701 AGAGTTCTTG AAGTGGTGGC CTAACCTACGG CTACACTAGA AGGACAGTAT
5751 TTGGTATCTG CGCTCTGCTG AAGCCAGTTA CCTTCGGAAA AAGAGTTGGT
5801 AGCTCTTGAT CCGGCAAACA AACCACCGCT GGTAGCGGTG GTTTTTTTGT
5851 TTGCAAGCAG CAGATTACGC GCAGAAAAAA AGGATCTCAA GAAGATCCTT
5901 TGATCTTTTC TACGGGGTCT GACGCTCAGT GGAACGAAAA CTCACGTTAA
5951 GGGATTTTGG TCATGAGATT ATCAAAAAGG ATCTTCACCT AGATCCTTTT
6001 AAATTAAAAA TGAAGTTTTA AATCAATCTA AAGTATATAT GAGTAAACTT
6051 GGTCTGACAG TTACCAATGC TTAATCAGTG AGGCACCTAT CTCAGCGATC
6101 TGTCTATTTT GTTCATCCAT AGTTGCCTGA CTCCCCGTCG TGTAGATAAC
6151 TACGATACGG GAGGGCTTAC CATCTGGCCC CAGTGCTGCA ATGATACCGC
6201 GAGACCCACG CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC
6251 GGAAGGGCCG AGCGCAGAAG TGGTCCTGCA ACTTTATCCG CCTCCATCCA
6301 GTCTATTAAT TGTTGCCGGG AAGCTAGAGT AAGTAGTTCG CCAGTTAATA
6351 GTTTGCGCAA CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG
6401 TCGTTTGGTA TGGCTTCATT CAGCTCCGGT TCCCAACGAT CAAGGCGAGT
6451 TACATGATCC CCCATGTTGT GCAAAAAAGC GGTTAGCTCC TTCGGTCCTC
6501 CGATCGTTGT CAGAAGTAAG TTGGCCGCAG TGTTATCACT CATGGTTATG
6551 GCAGCACTGC ATAATTCTCT TACTGTCATG CCATCCGTAA GATGCTTTTC
6601 TGTGACTGGT GAGTACTCAA CCAAGTCATT CTGAGAATAG TGTATGCGGC
6651 GACCGAGTTG CTCTTGCCCG GCGTCAATAC GGGATAATAC CGCGCCACAT
6701 AGCAGAACTT TAAAAGTGCT CATCATTTGA AACGTTCTT CGGGGCGAAA
6751 ACTCTCAAGG ATCTTACCGC TGTTGAGATC CAGTTCGATG TAACCCACTC
6801 GTGACCCCAA CTGATCTTCA GCATCTTTTA CTTTCACCAG CGTTTCTGGG
6851 TGAGCAAAAA CAGGAAGGCA AAATGCCGCA AAAAAGGGAA TAAGGGCGAC

6901 ACGGAAATGT TGAATACTCA TACTCTTCCT TTTTCAATAT TATTGAAGCA
6951 TTTATCAGGG TTATTGTCTC ATGAGCGGAT ACATATTTGA ATGTATTTAG
7001 AAAAATAAAC AAATAGGGGT TCCGCGCACA TTTCCCCGAA AAGTGCCACC
7051 TGACGTCTAA GAAACCATTA TTATCATGAC ATTAACCTAT AAAAATAGGC
7101 GTATCACGAG GCCCTTTCGT CTCGCGCGTT TCGGTGATGA CGGTGAAAAC
7151 CTCTGACACA TGCAGCTCCC GGAGACGGTC ACAGCTTGTC TGTAAGCGGA
7201 TGCCGGGAGC AGACAAGCCC GTCAGGGCGC GTCAGCGGGT GTTGGCGGGT
7251 GTCGGGGCTG GCTTAACTAT GCGGCATCAG AGCAGATTGT ACTGAGAGTG
7301 CACCATATGC GGTGTGAAAT ACCGCACAGA TCGGTAAGGA GAAAATACCG
7351 CATCAGGCGC CATTCGCCAT TCAGGCTGCG CAACTGTTGG GAAGGGCGAT
7401 CGGTGCGGGC CTCTTCGCTA TTACGCCAGC TGGCGAAAGG GGGATGTGCT
7451 GCAAGGCGAT TAAGTTGGGT AACGCCAGGG TTTTCCCACT CACGACGTTG
7501 TAAAACGACG GCCAGTGAAT TTCGACCTGC AGTCGACAGA AGCCTTACGT
7551 GACAGCTGGC GAAGAACCAT GGCCAGCTGG TGACAAGCCA AAACAGCTCT
7601 GGCTCGCAA ACATGTTCCC TTGGCTGCTT TCCACTTCCC CTTGTGCTTT
7651 GTTTACTTGT GTCAGCTGGT TGGCTCCCTA GGTATGAGCT CATGCTTGGC
7701 TGGCAGCCAT CCAGTTTTAG CCAGCTCTGC TTTGTTTACT TGTGTCAGCT
7751 GGTTGGCTCC CTAGGTATGA GCTCATGCTT GGCTGGCAGC CATCCAGTTT
7801 TAGCCAGCTC CTCCCTACCT TCCCTTTTTT TTATATATAC AGGAGGCCGA
7851 GGCCGCCTCC GCCTCCAAGC TTA CTCAGAA GTAGTAAGGG CGTGGAGGCT
7901 TTTTAGGAGG CCAGGGAAAT TCCCTTGTTT TTCCCTTTTT TGCAGTAATT
7951 TTTTGCTGCA AAAAGCTAA

Fig. 18

JCVPlong-gdnf Length: 6971 June 8, 1999 16:42 Type: N Check: 3588 ..

```

1  GCTAGCGATT TAGGTGACAC TATAGAATAG ATCCCCATGA AGTTATGGGA
51  TGTCGTGGCT GTCTGCCTGG TGCTGCTCCA CACCGCGTCC GCCTTCCCQC
101 TGCCCGCCGG TAAGAGGCCT CCCGAGGCGC CCGCCGAAGA CCGCTCCCTC
151 GGCCGCGCCG GCGCGCCCTT CGCGCTGAGC AGTGACTCAA ATATGCCAGA
201 GGATTATCCT GATCAGTTCG ATGATGTCAT GGATTTTATT CAAGCCACCA
251 TTTAAAGACT GAAAAGGTCA CCAGATAAAC AAATGGCAGT GCTTCCTAGA
301 AGAGAGCGGA ATCGGCAGGC TGCAGCTGCC AACCCAGAGA ATTCAGAGG
351 AAAAGGTCCG AGAGGCCAGA GGGGCAAAAA CCGGGGTTGT GTCTTAACTG
401 CAATACATTT AAATGTCACT GACTTGGGTC TGGGCTATGA AACCAAGGAG
451 GAACGTATTT TTAGGTACTG CAGCGGCTCT TGCATGTCAG CTGAGACAAC
501 GTACGACAAA ATATTGAAAA ACTTATCCAG AAATAGAAGG CTGGTGAGTG
551 ACAAAGTAGG GCAGGCATGT TGCAGACCCA TCGCCTTTGA TGATGACCTG
601 TCGTTTTTAG ATGATAACCT GGTTTACCAT ATTCTAAGAA AGCATTCGCG
651 TAAAAGGTGT GGATGTATCT GACTGGTGCG CCGTCTTTCC CGACGTAAA
701 GGGATGAAAC CACAAGACTT ACCTTCGCTC GGAAGTAAAA CGACAAACAC
751 ACACAGTTTT GCCCGTTTTT ATGAGAAATG GGACGTCTGC GCACGAAACG
801 CGCCGTCGCT TGAGGAGGAC TTGTACAAAC ACGATCTATG CAGGTTTCCC
851 CAACTGACAC AAACCGTGCA ACTTGAAACT CCGCCTGGTC TTCCAGGGTC
901 TAGAGGGGTA ACATTTTGTA CTGTGTTTGA CTCCACGCTC GATCCACTAG
951 CGAGTGTTAG TAGCGTACT GCTGTCTCGT AGCGGAGCAT GTTGCCGCTG
1001 GGAACACCTC CTTGGTAAAC AGGACCCACG GGGCCGAAAG CCATGTCCTA
1051 ACGGACCCAA CATGTGTGCA ACCCCAGCAC GGCAGCTTTA CTGTGAAACC
1101 CACTTCAAGG TGACATTGAT ACTGGTACTC AAACACTGGT GACAGGCTAA
1151 GGATGCCCTT CAGGTACCCC GAGGTAACAA GCGACACTCG GGATCTGAGA
1201 AGGGGACTGG GACTTCTTTA AAGTGCCAG TTTAAAAGC TTCTACGCCT
1251 GAATAGGTGA CCGGAGGCCG GCACCTTTCC TTTTATAACC ACTGAACACA
1301 TGGGAAGACG CAAAAACATA AAGAAAGGCC CGGCGCCATT CTATCCTCTA
1351 GAGGATGGAA CCGCTGGAGA GCAACTGCAT AAGGCTATGA AGAGATACGC
1401 CCTGGTTTCT GGAACAATTG CTTTTACAGA TGCACATATC GAGGTGAACA
1451 TCACGTACGC GGAATACTTC GAAATGTCCG TTCGGTTGGC AGAAGCTATG
1501 AAACGATATG GCGTGAATAC AAATCACAGA ATCGTCGTAT GCAGTGAAAA
1551 CTCTCTTCAA TTCTTTATGC CGGTGTTGGG CGCGTTATTT ATCGGAGTTG
1601 CAGTTGCGCC CGCGAACGAC ATTTATAATG AACGTGAATT GCTCAACAGT
1651 ATGAACATTT CGCAGCCTAC CGTAGTGTTT GTTTCCTAAA AGGGGTTGCA
1701 AAAAATTTTG AACGTGCAAA AAAAATTACC AATAATCCAG AAAATTATTA
1751 TCATGGATTG TAAACGGAT TACCAGGGAT TTCAGTCGAT GTACACGTTT
1801 GTCACATCTC ATCTACCTCC CGGTTTTAAT GAATACGATT TTGTACCAGA
1851 GTCCTTTGAT CGTGACAAAA CAATTGCACT GATAATGAAT TCCTCTGGAT
1901 CTAATGGGTT ACCTAAGGGT GTGGCCCTTC CGCATAGAAC TGCCTGCGTC
1951 AGATTCTCGC ATGCCAGAGA TCCTATTTTT GGCAATCAAA TCATTCCGGA
2001 TACTGCGATT TTAAGTGTG TTCCATTCCA TCACGGTTTT GGAATGTTTA
2051 CTACACTCGG ATATTTGATA TGTGGATTTT GAGTCGTCTT AATGTATAGA
2101 TTTGAAGAAG AGCTGTTTTT ACGATCCCTT CAGGATTACA AAATTCAAAG
2151 TGCGTTGCTA GTACCAACCC TATTTTCATT CTTGCGCAA AGCACTCTGA
2201 TTGACAAATA CGATTTATCT AATTTACACG AAATTGCTTC TGGGGGCGCA
2251 CCTCTTTTCA AAGAAGTCGG GGAAGCGGTT GCAAAACGCT TCCATCTTCC
2301 AGGGATACGA CAAGGATATG GGCTCACTGA GACTACATCA GCTATTCTGA
2351 TTACACCCGA GGGGGATGAT AAACCGGGCG CGGTGCGTAA AGTTGTTCCA
2401 TTTTTTGAAG CGAAGGTTGT GGATCTGGAT ACCGGGAAAA CGCTGGGCGT
2451 TAATCAGAGA GGCGAATTAT GTGTGAGAGG ACCTATGATT ATGTCCGGTT
2501 ATGTAAACAA TCCGGAAGCG ACCAACGCCT TGATTGACAA GGATGGATGG
2551 CTACATTTCT GAGACATAGC TTACTGGGAC GAAGACGAAC ACTTCTTCAT
2601 AGTTGACCGC TTGAAGTCTT TAATTAAATA CAAAGGATAT CAGGTGGCCC
2651 CCGCTGAATT GGAATCGATA TTGTTACAAC ACCCAACAT CTTGACGCG
2701 GCGGTGGCAG GTCTTCCCGA CGATGACGCC GGTGAACCTC CCGCCGCCGT
2751 TGTGTTTTTG GAGCACGGA AGACGATGAC GGAAGAAAG AGCTGGGATT
2801 ACGTCGCCAG TCAAGTAACA ACCGCGAAAA AGTTGCGCGG AGGAGTTGTG
2851 TTTGTGGACG AAGTACCGAA AGGTCTTACC GGAAGTCTCG ACGCAAGAAA
2901 AATCAGAGAG ATCCTCATAA AGGCCAAGAA GGGCGGAAAG TCCAAATTGT
2951 AAAATGTAAC TGTATTGAGC GATGACGAAA TTCTTAGCTA TTGTAATGAC
3001 TCTAGAGGAT CTTTGTGAAG GAACCTTACT TCTGTGGTGT GACATAATTG
3051 GACAAACTAC CTACAGAGAT TTAAAGCTCT AAGGTAATA TAAAATTTTT
3101 AAGTGATATA TGTGTTAAAC TACTGATTCT AATTGTTTGT GTATTTTAGA
3151 TTCCAACCTA TGGAAGTAT GAATGGGAGC AGTGGTGGAA TGCCTTTAAT
3201 GAGGAAACC TGTTTTGCTC AGAAGAAATG CCATCTAGTG ATGATGAGGC

```

Fig. 19

| | | | | | |
|------|-------------|------------|-------------|-------------|-------------|
| 3251 | TACTGCTGAC | TCTCAACATT | CTACTCCTCC | AAAAAGAAG | AGAAAGGTAG |
| 3301 | AAGACCCCAA | GGACTTTCCT | TCAGAATTGC | TAAGTTTTTT | GAGTCATGCT |
| 3351 | GTGTTTAGTA | ATAGAACTCT | TGCTTGCTTT | GCTATTTACA | CCACAAAGGA |
| 3401 | AAAAGCTGCA | CTGCTATACA | AGAAAATTAT | GGAAAAATAT | TCTGTAACCT |
| 3451 | TTATAAGTAG | GCATAACAGT | TATAATCATA | ACATACTGTT | TTTCTTACT |
| 3501 | CCACACAGGC | ATAGAGTGTC | TGCTATTAAT | AACTATGCTC | AAAAATTGTG |
| 3551 | TACCTTTAGC | TTTTTAATTT | GTAAGGGGT | TAATAAGGAA | TATTTGATGT |
| 3601 | ATAGTGCCCT | GACTAGAGAT | CATAATCAGC | CATACCACAT | TTGTAGAGGT |
| 3651 | TTTACTTGCT | TTAAAAAACC | TCCCACACCT | CCCCCTGAAC | CTGAAACATA |
| 3701 | AAATGAATGC | AATTGTTGTT | GTTAACTTGT | TTATTGCAGC | TTATAATGGT |
| 3751 | TACAAATAAA | GCAATAGCAT | CACAAATTTT | ACAAATAAAG | CATTTTTTTC |
| 3801 | ACTGCATTCT | AGTTGTGGTT | TGTCCAAACT | CATCAATGTA | TCTTATCATG |
| 3851 | TCTGGATCCC | CGGGTCCCTA | TAGTGAGTCG | TATTAGCTTG | GCGTAATCAT |
| 3901 | GGTCATAGCT | GTTTCCTGTG | TGAAATTGTT | ATCCGCTCAC | AATTCCACAC |
| 3951 | AACATACGAG | CCGGAAGCAT | AAAGTGTAAG | GCCTGGGGTG | CCTAATGAGT |
| 4001 | GAGCTAACTC | ACATTAATTG | CGTTGCGCTC | ACTGCCCGCT | TTCCAGTCGG |
| 4051 | GAAACCTGTC | GTGCCAGCTG | CATTAATGAA | TCGGCCAACG | CGCGGGGAGA |
| 4101 | GGCGTTTTCG | GTTTGGGCG | CTCTTCCGCT | TCCTCGCTCA | CTGACTCGCT |
| 4151 | GCGCTCGGTC | GTTTCGGCTG | GGCGAGCGGT | ATCAGCTCAC | TCAAAGGCGG |
| 4201 | TAATACGGTT | ATCCACAGAA | TCAGGGGATA | ACGCAGGAAA | GAACATGTGA |
| 4251 | GCAAAGGCC | AGCAAAAGGC | CAGGAACCGT | AAAAAGGCCG | CGTTGCTGGC |
| 4301 | GTTTTTCCAT | AGGCTCCGCC | CCCCTGACGA | GCATCACAAA | AATCGACGCT |
| 4351 | CAAGTCAGAG | GTGGCGAAAC | CCGACAGGAC | TATAAAGATA | CCAGGCGTTT |
| 4401 | CCCGCTGGAA | GCTCCCTCGT | GCGCTCTCCT | GTTCCGACCC | TGCCGCTTAC |
| 4451 | CGGATACCTG | TCCGCCTTTC | TCCCTTCGGG | AAGCGTGGCG | CTTTCTCAAT |
| 4501 | GCTCAGCTG | TAGGTATCTC | AGTTTCGGTG | AGGTCGTTTC | CTCCAAGCTG |
| 4551 | GGCTGTGTGC | ACGAACCCCT | CGTTTCAGCC | GACCGCTGCG | CCTTATCCGG |
| 4601 | TAAGTATCGT | CTTGAGTCCA | ACCCGGTAAG | ACACGACTTA | TCGCCACTGG |
| 4651 | CAGCAGCCAG | TGGTAACAGG | ATTAGCAGAG | CGAGGTATGT | AGGCGGTGCT |
| 4701 | ACAGAGTTCT | TGAAGTGGTG | GCCTAACTAC | GGCTACACTA | GAAGGACAGT |
| 4751 | ATTTGGTATC | TGCGCTCTGC | TGAAGCCAGT | TACCTTCGGA | AAAAGAGTTG |
| 4801 | GTAGCTCTTG | ATCCGGCAAA | CAAACCACCG | CTGGTAGCGG | TGGTTTTTTT |
| 4851 | GTTTGCAAGC | AGCAGATTAC | GCGCAGAAAA | AAAGGATCTC | AAGAAGATCC |
| 4901 | TTTGATCTTT | TCTACGGGGT | CTGACGCTCA | GTGGAACGAA | AACTCACGTT |
| 4951 | AAGGGATTTT | GGTCATGAGA | TTATCAAAAA | GGATCTTCAC | CTAGATCCTT |
| 5001 | TTAAATTAAT | AATGAAGTTT | TAAATCAATC | TAAAGTATAT | ATGAGTAAAC |
| 5051 | TTGGTCTGAC | AGTTACCAAT | GCTTAATCAG | TGAGGCACCT | ATCTCAGCGA |
| 5101 | TCTGTCTATT | TCGTTTCATC | ATAGTTGCCT | GACTCCCCGT | CGTGTAGATA |
| 5151 | ACTACGATA | GGGAGGGCTT | ACCATCTGGC | CCCAGTGCTG | CAATGATACC |
| 5201 | GCGAGACCCA | CGGTCACCGG | CTCCAGATTT | ATCAGCAATA | AACCAGCCAG |
| 5251 | CCGGAAGGGC | CGAGCGCAGA | AGTGGTCCTG | CAACTTTATC | CGCCTCCATC |
| 5301 | CAGTCTATTA | ATTGTTGCCG | GGAAGCTAGA | GTAAGTAGTT | CGCCAGTTAA |
| 5351 | TAGTTTGCGC | AACGTTGTTG | CCATTGCTAC | AGGCATCGTG | GTGTCACGCT |
| 5401 | CGTCGTTTGG | TATGGCTTCA | TTTCACTCCG | GTTCCCAACG | ATCAAGGCGA |
| 5451 | GTGATCATGAT | CCCCATGTTT | GTGCAAAAAA | GCGGTTAGCT | CCTTCGGTCC |
| 5501 | TCCGATCGTT | GTCAGAAGTA | AGTTGGCCGC | AGTGTATATCA | CTCATGGTTA |
| 5551 | TGGCAGCACT | GCATAATTCT | CTTACTGTCA | TGCCATCCGT | AAGATGCTTT |
| 5601 | TCTGTGACTG | GTGAGTACTC | AACCAAGTCA | TTCTGAGAAT | AGTGTATGCG |
| 5651 | GCGACCGAGT | TGCTCTTGCC | CGGCGTCAAT | ACGGGATAAT | ACCGCGCCAC |
| 5701 | ATAGCAGAAC | TTTAAAAGTG | CTCATCATTT | GAAAACGTTT | TTCGGGGCGA |
| 5751 | AAACTCTCAA | GGATCTTACC | GCTGTTGAGA | TCCAGTTCGA | TGTAACCCAC |
| 5801 | TCGTGCACCC | AACTGATCTT | CAGCATCTTT | TACTTTCACC | AGCGTTTCTG |
| 5851 | GGTGAGCAAA | AACAGGAAGG | CAAAATGCCG | CAAAAAAGGG | AATAAGGGCG |
| 5901 | ACACGGAAT | GTTGAATACT | CATACTCTTC | CTTTTTCAAT | ATTATTGAAG |
| 5951 | CATTATCAG | GGTTATTGTC | TCATGAGCGG | ATACATATTT | GAATGTATTT |
| 6001 | AGAAAAATAA | ACAAATAGGG | GTTCCGCGCA | CATTTCCCCG | AAAAGTGCCA |
| 6051 | CCTGACGTCT | AAGAAACCAT | TATTATCATG | ACATTAACCT | ATAAAAAATAG |
| 6101 | GCGTATCACG | AGGCCCTTTC | GTCTCGCGCG | TTTCGGTGAT | GACGGTGAAA |
| 6151 | ACCTCTGACA | CATGCAGCTC | CCGGAGACGG | TCACAGCTTG | TCTGTAAGCG |
| 6201 | GATGCCGGGA | GCAGACAAGC | CCGTCAGGGC | GCGTCAGCGG | GTGTTGGCGG |
| 6251 | GTGTCGGGGC | TGGCTTAACT | ATGCGGCATC | AGAGCAGATT | GTAAGGAGAG |
| 6301 | TGCACCATAT | GCGGTGTGAA | ATACCGCACA | GATGCGTAAG | GAGAAAATAC |
| 6351 | CGCATCAGGC | GCCATTGCGC | ATTGAGGCTG | CGCAACTGTT | GGGAAGGGCG |
| 6401 | ATCGGTGCGG | GCCTCTTCGC | TATTACGCCA | GCTGGCGAAA | GGGGGATGTG |
| 6451 | CTGCAAGGCG | ATTAAGTTGG | GTAACGCCAG | GGTTTTCCCA | GTCACGACGT |
| 6501 | TGTAAAACGA | CGGCCAGTGA | ATTTTCGACCT | GCAGTCGACA | GAAGCCTTAC |
| 6551 | GTGACAGCTG | GCGAAGAACC | ATGGCCAGCT | GGTGACAAGC | CAAAACAGCT |

Fig. 19

Fig. 19

pD12JCVshort-hCNTF

Length: 7558

1 GCTAGCGATT TAGGTGACAC TATAGAATCt cgacnnGTCA CCCCTAGAGT
51 CGAGCTGTGA CGGTCCTTAC AATGAAATGC ANCTGGGTTA TCTTCTTCCT
101 GATGGCAGGG GTTACAGGTA AGGGGCTCCC AAGTCCCAA CTTGAGGGTC
151 CATAAACTCT GTGACAGTGG CAATCACTTT GCCTTTCTTT CTACAGGGGT
201 GAATTCGGCT TTCACAGAGC ATTCACCGCT GACCCCTCAC CGTCGGGACC
251 TCTGTAGCCG CTCTATCTGG CTAGCAAGGA AGATTCGTTT AGACCTTGAC
301 TGCTCTTACG GAATCCTATG TAAGTTGCCT ATTTTGCTGT TATCTGTTTT
351 CCCTTCATCT TTTTGTATCC AGCAACTTAC CATCACGCAT CAGCTCCATT
401 ACCAATTGTG AAAGCTCTAA TCATATAGTC ATTCATATAG GTTATTTGAC
451 ATGGGCCCTT CCCTTGAGGA AACCCATGTG ACTTTATTTT CTCCTCTGG
501 GCTGTTTAGG AGATGAAGTT ACTTGAATGA GAAAATATAT ATGGAGTTCT
551 AGAAAGGATT GGTTTATATG TCTTGGAGGC TATTTCAAAA TTTATTTGGC
601 CATATATTCT GAATACTACC TAGAACAGAT TAGCCATGGG CCCTNTGGGT
651 TTTTCATAAG CCATTGTTCT GAANTTTTTT AGCTTTGTAA ATGAAAGGT
701 TATGGGATAG GAAGAGTNCT ATGAACGTGG GAGGAATTTG TAAATCCTAC
751 CAATTTNTNC TATATAGCAT TAGCCCCAC CTTTANTAT TCTGCATCAA
801 AAGTAAGATT GTGTCTAAAG AGAAAGGTNA GCTATCAAAA GGACTCCTAT
851 AANATTCTNT GGAAACTTNT GGAANTGTCA AATTNTTTTG AGCTAATTNT
901 TGGAGTTCCA AANTTTGTCT TNTNACAGTN AAGGGGGANC CCCATTCANA
951 TTTNCCCCC TNNNGANAAT GCTTGGGGGA AAAAACCTNC CAACCCNTT
1001 GTGGGANGAA GTTTTTTTAA NNTTTTAAGG CTNGNNGAAA CNGGNTTTA
1051 ATTTTTTGGG NCNANCGCCT NTCCCCGTA CCAGGAAAAT CAGGACCTNT
1101 TTTTGGGGNN GNGCNCCNAC NGGGGGGNAA AANGGGAAAT TTCNTCANAA
1151 AAAATCTTTT CCGnnnnnng tgaagcatca gggcctgaac aagaacatca
1201 acctggactc tgcggatggg atgccagtgg caagcactga tcagtggagt
1251 gagctgaccg aggcagagcg actccaagag aaccttcaag cttatcgtac

1301 cttccatggt ttgttggcca ggctcttaga agaccagcag gtgcatttta
1351 ccccaaccga aggtgacttc catcaagcta tacataccct tcttctccaa
1401 gtcgctgcct ttgcatacca gatagaggag ttaatgatac tcttgggaata
1451 caagatcccc cgcaatgagg ctgatgggat gcctattaat gttggagatg
1501 gtggtctctt tgagaagaag ctgtggggcc taaagggtgct gcaggagctt
1551 tcacagtgga cagtaaggtc catccatgac cttcgtttca tttcttctca
1601 tcagactggg atcccagcac gtgggagcca ttatattgct aacaacaaga
1651 aaatgtagnn nnnngcgccT GCGCCGTCTT TCCCGACGTT AAAGGGATGA
1701 AACCACAAGA CTTACCTTCG CTCGGAAGTA AAACGACAAA CACACACAGT
1751 TTTGCCCGTT TTCATGAGAA ATGGGACGTC TGCGCACGAA ACGCGCCGTC
1801 GCTTGAGGAG GACTTGTACA AACACGATCT ATGCAGGTTT CCCCAACTGA
1851 CACAAACCGT GCAACTTGAA ACTCCGCCTG GTCTTTCCAG GTCTAGAGGG
1901 GTAACATTTT GTACTGTGTT TGACTCCACG CTCGATCCAC TAGCGAGTGT
1951 TAGTAGCGGT ACTGCTGTCT CGTAGCGGAG CATGTTGGCC GTGGGAACAC
2001 CTCCTTG GTA ACAAGGACCC ACGGGGCCGA AAGCCATGTC CTAACGGACC
2051 CAACATGTGT GCAACCCCAG CACGGCAGCT TTA CTGTGAA ACCCACTTCA
2101 AGGTGACATT GATACTGGTA CTCAAACACT GGTGACAGGC TAAGGATGCC
2151 CTT CAGGTAC CCCGAGGTAA CAAGCGACAC TCGGGATCTG AGAAGGGGAC
2201 TGGGACTTCT TTAAAGTGCC CAGTTTAAAA AGCTTCTACG CCTGAATAGG
2251 TGACCGGAGG CCGGCACCTT TCCTTTTATA ACCACTGAAC ACATGGAAGA
2301 CGCCAAAAAC ATAAAGAAAG GCCCGGCGCC ATTCTATCCT CTAGAGGATG
2351 GAACCGCTGG AGAGCAACTG CATAAGGCTA TGAAGAGATA CGCCCTGGTT
2401 CCTGGAACAA TTGCTTTTAC AGATGCACAT ATCGAGGTGA ACATCACGTA
2451 CGCGGAATAC TTCGAAATGT CCGTTCGGTT GGCAGAAGCT ATGAAACGAT
2501 ATGGGCTGAA TACAAATCAC AGAATCGTCG TATGCAGTGA AACTCTCTT
2551 CAATTCTTTA TGCCGGTGTT GGGCGCGTTA TTTATCGGAG TTGCAGTTGC
2601 GCCCGCGAAC GACATTTATA ATGAACGTGA ATTGCTCAAC AGTATGAACA
2651 TTT CGCAGCC TACCGTAGTG TTTGTTTCCA AAAAGGGGTT GCAAAAAATT

2701 TTGAACGTGC AAAAAAATT ACCAATAATC CAGAAAATTA TTATCATGGA
2751 TTCTAAAACG GATTACCAGG GATTTCAGTC GATGTACACG TTCGTCACAT
2801 CTCATCTACC TCCCGGTTTT AATGAATACG ATTTTGTACC AGAGTCCTTT
2851 GATCGTGACA AAACAATTGC ACTGATAATG AATTCCTCTG GATCTACTGG
2901 GTTACCTAAG GGTGTGGCCC TTCCGCATAG AACTGCCTGC GTCAGATTCT
2951 CGCATGCCAG AGATCCTATT TTTGGCAATC AAATCATTCC GGATACTGCG
3001 ATTTTAAGTG TTGTTCCATT CCATCACGGT TTTGGAATGT TTA CTACACT
3051 CGGATATTTG ATATGTGGAT TTCGAGTCGT CTTAATGTAT AGATTGAAG
3101 AAGAGCTGTT TTTACGATCC CTTCAGGATT ACAAATTCA AAGTGCGTTG
3151 CTAGTACCAA CCCTATTTTC ATTCTTCGCC AAAAGCACTC TGATTGACAA
3201 ATACGATTTA TCTAATTTAC ACGAAATTGC TTCTGGGGGC GCACCTCTTT
3251 CGAAAGAAGT CGGGGAAGCG GTTGCAAAAC GCTTCCATCT TCCAGGGATA
3301 CGACAAGGAT ATGGGCTCAC TGAGACTACA TCAGCTATTC TGATTACACC
3351 CGAGGGGGAT GATAAACCGG GCGCGGTCGG TAAAGTTGTT CCATTTTTTG
3401 AAGCGAAGGT TGTGGATCTG GATACCGGGA AAACGCTGGG CGTTAATCAG
3451 AGAGGCGAAT TATGTGTCAG AGGACCTATG ATTATGTCCG GTTATGTAAA
3501 CAATCCGGAA GCGACCAACG CTTGATTGA CAAGGATGGA TGGCTACATT
3551 CTGGAGACAT AGCTTACTGG GACGAAGACG AACACTTCTT CATAGTTGAC
3601 CGCTTGAAGT CTTTAATTAA ATACAAAGGA TATCAGGTGG CCCCCGCTGA
3651 ATTGGAATCG ATATTGTTAC AACACCCCAA CATCTTCGAC GCGGGCGTGG
3701 CAGGTCTTCC CGACGATGAC GCCGGTGAAC TTCCCGCCGC CGTTGTTGTT
3751 TTGGAGCACG GAAAGACGAT GACGGAAAAA GAGATCGTGG ATTACGTCGC
3801 CAGTCAAGTA ACAACGCGA AAAAGTTGCG CGGAGGAGTT GTGTTTGTGG
3851 ACGAAGTACC GAAAGGTCTT ACCGGAAAAC TCGACGCAAG AAAAATCAGA
3901 GAGATCCTCA TAAAGGCCAA GAAGGGCGGA AAGTCCAAAT TGTAATATGT
3951 AACTGTATTC AGCGATGACG AAATTCTTAG CTATTGTAAT GACTCTAGAG
4001 GATCTTTGTG AAGGAACCTT ACTTCTGTGG TGTGACATAA TTGGACAAAC
4051 TACCTACAGA GATTTAAAGC TCTAAGGTAA ATATAAAATT TTTAAGTGTA

4101 TAATGTGTTA AACTACTGAT TCTAATTGTT TGTGTATTTT AGATTCCAAC
4151 CTATGGAAC TATGAATGGG AGCAGTGGTG GAATGCCTTT AATGAGGAAA
4201 ACCTGTTTTG CTCAGAAGAA ATGCCATCTA GTGATGATGA GGCTACTGCT
4251 GACTCTCAAC ATTCTACTCC TCCAAAAAAG AAGAGAAAGG TAGAAGACCC
4301 CAAGGACTTT CCTTCAGAAT TGCTAAGTTT TTTGAGTCAT GCTGTGTTTA
4351 GTAATAGAAC TCTTGCTTGC TTTGCTATTT ACACCACAAA GGAAAAAGCT
4401 GCACTGCTAT ACAAGAAAAT TATGGAAAAA TATTCTGTAA CCTTTATAAG
4451 TAGGCATAAC AGTTATAATC ATAACATACT GTTTTTTCTT ACTCCACACA
4501 GGCATAGAGT GTCTGCTATT AATAACTATG CTCAAAAATT GTGTACCTTT
4551 AGCTTTTTTAA TTTGTAAAGG GGTTAATAAG GAATATTTGA TGTATAGTGC
4601 CTTGACTAGA GATCATAATC AGCCATACCA CATTTGTAGA GGTTTTACTT
4651 GCTTTAAAAA ACCTCCCACA CCTCCCCCTG AACCTGAAAC ATAAAATGAA
4701 TGCAATTGTT GTTGTTAACT TGTTTATTGC AGCTTATAAT GGTTACAAAT
4751 AAAGCAATAG CATCACAAAT TTCACAAATA AAGCATTTTT TTTACTGCAT
4801 TCTAGTTGTG GTTTGTCCAA ACTCATCAAT GATCTTATC ATGTCTGGAT
4851 CCCCGGGTCC CTATAGTGAG TCGTATTAGC TTGGCGTAAT CATGGTCATA
4901 GCTGTTTCCT GTGTGAAATT GTTATCCGCT CACAATTCCA CACAACATAC
4951 GAGCCGGAAG CATAAAGTGT AAAGCCTGGG GTGCCTAATG AGTGAGCTAA
5001 CTCACATTAA TTGCGTTGCG CTCACTGCCC GCTTTCCAGT CGGGAAACCT
5051 GTCGTGCCAG CTGCATTAAAT GAATCGGCCA ACGCGCGGGG AGAGGCGGTT
5101 TGCCTATTGG GCGCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG
5151 GTCGTTTCGGC TGCGGCGAGC GGTATCAGCT CACTCAAAGG CGGTAATACG
5201 GTTATCCACA GAATCAGGGG ATAACGCAGG AAAGAACATG TGAGCAAAAG
5251 GCCAGCAAAA GGCCAGGAAC CGTAAAAAGG CCGCGTTGCT GGCGTTTTTC
5301 CATAGGCTCC GCCCCCTGA CGAGCATCAC AAAAATCGAC GCTCAAGTCA
5351 GAGGTGGCGA AACCCGACAG GACTATAAAG ATACCAGGCG TTTCCCCCTG
5401 GAAGCTCCCT CGTGCGCTCT CCTGTTCCGA CCCTGCCGCT TACCGGATAC
5451 CTGTCCGCCT TTCTCCCTTC GGGAAGCGTG GCGCTTTCTC AATGCTCAGC

5501 CTGTAGGTAT CTCAGTTCGG TGTAGGTCGT TCGCTCCAAG CTGGGCTGTG
5551 TGCACGAACC CCCCGTTCAG CCCGACCGCT GCGCCTTATC CGGTAACAT
5601 CGTCTTGAGT CCAACCCGGT AAGACACGAC TTATCGCCAC TGGCAGCAGC
5651 CACTGGTAAC AGGATTAGCA GAGCGAGGTA TGTAGGCGGT GCTACAGAGT
5701 TCTTGAAGTG GTGGCCTAAC TACGGCTACA CTAGAAGGAC AGTATTTGGT
5751 ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GGAAAAAGAG TTGGTAGCTC
5801 TTGATCCGGC AAACAAACCA CCGCTGGTAG CGGTGGTTTT TTTGTTTGCA
5851 AGCAGCAGAT TACGCGCAGA AAAAAAGGAT CTCAAGAAGA TCCTTTGATC
5901 TTTTCTACGG GGTCTGACGC TCAGTGGAAC GAAAACTCAC GTTAAGGGAT
5951 TTTGGTCATG AGATTATCAA AAAGGATCTT CACCTAGATC CTTTTAAATT
6001 AAAAATGAAG TTTTAAATCA ATCTAAAGTA TATATGAGTA AACTTGGTCT
6051 GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG CGATCTGTCT
6101 ATTTTCGTTCA TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACCTACGA
6151 TACGGGAGGG CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAC
6201 CCACGCTCAC CGGCTCCAGA TTTATCAGCA ATAAACCAGC CAGCCGGAAG
6251 GGCCGAGCGC AGAAGTGGTC CTGCAACTTT ATCCGCCTCC ATCCAGTCTA
6301 TTAATTGTTG CCGGGAAGCT AGAGTAAGTA GTTCGCCAGT TAATAGTTTG
6351 CGCAACGTTG TTGCCATTGC TACAGGCATC GTGGTGTAC GCTCGTCGTT
6401 TGGTATGGCT TCATTCAGCT CCGGTTCCCA ACGATCAAGG CGAGTTACAT
6451 GATCCCCCAT GTTGTGCAAA AAAGCGGTTA GCTCCTTCGG TCCTCCGATC
6501 GTTGTGAGAA GTAAGTTGGC CGCAGTGTTA TCACTCATGG TTATGGCAGC
6551 ACTGCATAAT TCTCTTACTG TCATGCCATC CGTAAGATGC TTTTCTGTGA
6601 CTGGTGAGTA CTCAACCAAG TCATTCTGAG AATAGTGTAT GCGGCGACCG
6651 AGTTGCTCTT GCCCGGCGTC AATACGGGAT AATACCGCGC CACATAGCAG
6701 AACTTTAAAA GTGCTCATCA TTGGAAAACG TTCTTCGGGG CGAAAACTCT
6751 CAAGGATCTT ACCGCTGTTG AGATCCAGTT CGATGTAACC CACTCGTGCA
6801 CCCAACTGAT CTTCAGCATC TTTTACTTTC ACCAGCGTTT CTGGGTGAGC
6851 AAAAACAGGA AGGCAAAATG CCGCAAAAAA GGAATAAGG GCGACACGGA

6901 AATGTTGAAT ACTCATACTC TTCCTTTTTC AATATTATTG AAGCATTAT
6951 CAGGGTTATT GTCTCATGAG CGGATACATA TTTGAATGTA TTTAGAAAAA
7001 TAAACAAATA GGGGTTCCGC GCACATTTCC CCGAAAAGTG CCACCTGACG
7051 TCTAAGAAAC CATTATTATC ATGACATTAA CCTATAAAAA TAGGCGTATC
7101 ACGAGGCCCT TTCGTCTCGC GCGTTTCGGT GATGACGGTG AAAACCTCTG
7151 ACACATGCAG CTCCCGGAGA CGGTCACAGC TTGTCTGTAA GCGGATGCCG
7201 GGAGCAGACA AGCCCGTCAG GGCGCGTCAG CGGGTGTTGG CGGGTGTCGG
7251 GGCTGGCTTA ACTATGCGGC ATCAGAGCAG ATTGTACTGA GAGTGCACCA
7301 TATGCGGTGT GAAATACCGC ACAGATGCGT AAGGAGAAAA TACCGCATCA
7351 GGCGCCATTC GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG
7401 CGGGCCTCTT CGCTATTACG CCAGCTGGCG AAAGGGGGAT GTGCTGCAAG
7451 GCGATTAAGT TGGGTAACGC CAGGGTTTTTC CCAGTCACGA CGTTGTAAAA
7501 CGACGGCCAG TGAATTTCTGA CCTGCAGtcg acttttttta tatatacagg
7551 aggccgag

Fig. 20

JCVPshort-hgdnf Length: 6565 June 8, 1999 16:57 Type: N Check:

```

1  GCTAGCGATT TAGGTGACAC TATAGAATAG ATCCCCATGA AGTTATGGGA
51  TGTCGTGGCT GTCTGCCTGG TGCTGCTCCA CACCGCGTCC GCCTTCCCGC
101 TGCCCCCGCG TAAGAGGCCT CCCGAGGCGC CCGCCGAAGA CCGCTCCCTC
151 GGCCGCCGCC GCGCGCCCTT CCGCTGAGC AGTGACTCAA ATATGCCAGA
201 GGATTATCCT GATCAGTTCG ATGATGTCAT GGATTTTATT CAAGCCACCA
251 TTAAAAGACT GAAAAGGTCA CCAGATAAAC AAATGGCAGT GCTTCCTAGA
301 AGAGAGCGGA ATCGGCAGGC TGCAGCTGCC AACCAGAGA ATTCCAGAGG
351 AAAAGGTCGG AGAGGCCAGA GGGGCAAAAA CCGGGGTGTG GTCTTAACTG
401 CAATACATTT AAATGTCACT GACTTGGGTC TGGGCTATGA AACCAAGGAG
451 GAACTGATTT TTAGGTACTG CAGCGGCTCT TGCGATGCAG CTGAGACAAC
501 GTACGACAAA ATATTGAAAA ACTTATCCAG AAATAGAAGG CTGGTGAGTG
551 ACAAGTAGAG CAGGCATGT TGCAGACCCA TCGCCTTTGA TGATGACCTG
601 TCGTTTTTAG ATGATAACCT GGTTTACCAT ATTCTAAGAA AGCATTCCGC
651 TAAAAGGTGT GGATGTATCT GACTGGTGCG CCGTCTTTCC CGACGTTAAA
701 GGGATGAAAC CACAAGACTT ACCTTCGCTC GGAAGTAAAA CGACAAACAC
751 ACACAGTTTT GCCCGTTTTT ATGAGAAATG GGACGCTGCG GCACGAAACG
801 CGCCGTCGCT TGAGGAGGAC TTGTACAAAC ACGATCTATG CAGGTTTCCC
851 CAACTGACAC AAACCGTGCA ACTTGAAACT CCGCCTGGTC TTTCCAGGTC
901 TAGAGGGGTA ACATTTTGTA CTGTGTTTGA CTCCACGCTC GATCCACTAG
951 CGAGTGTTAG TAGCGGTACT GCTGTCTCGT AGCGGAGCAT GTTGGCCGTG
1001 GGAACACCTC CTTGGTAACA AGGACCCACG GGGCCGAAAG CCATGTCCTA
1051 ACGGACCCAA CATGTGTGCA ACCCCAGCAC GGCAGCTTTA CTGTGAAACC
1101 CACTTCAAGG TGACATTGAT ACTGGTACTC AAACACTGGT GACAGGCTAA
1151 GGATGCCCTT CAGGTACCCC GAGGTAACAA GCGACACTCG GGATCTGAGA
1201 AGGGGACTGG GACTTCTTTA AAGTGCCCAG TTTAAAAAGC TTCTACGCCT
1251 GAATAGGTGA CCGGAGGCCG GCACCTTTCC TTTTATAACC ACTGAACACA
1301 TGGAAGACGC CAAAAACATA AAGAAAGGCC CGGCCCCATT CTATCCTCTA
1351 GAGGATGGAA CCGCTGGAGA GCAACTGCAT AAGGCTATGA AGAGATACGC
1401 CCTGGTTCCT GGAACAATTG CTTTTACAGA TGCACATATC GAGGTGAACA
1451 TCACGTACGC GGAATACTTC GAAATGTCCG TTCGGTTGGC AGAAGCTATG
1501 AAACGATATG GGCTGAATAC AAATCACAGA ATCGTCGTAT GCAGTGAAAA
1551 CTCTCTTCAA TTCTTTATGC CGGTGTGGG CCGCTTATTT ATCGGAGTTG
1601 CAGTTGCGCC CGCGAACGAC ATTTATAATG AACGTGAATT GCTCAACAGT
1651 ATGAACATTT CGCAGCCTAC CGTAGTGTTT GTTTCCAAA AGGGGTTGCA
1701 AAAAAATTTG AACGTGCAAA AAAAAATTAC AATAATCCAG AAAATTATTA
1751 TCATGGATTG TAAAACGGAT TACCAGGGAT TTCAGTCGAT GTACACGTTT
1801 GTCACATCTC ATCTACCTCC CGGTTTTAAT GAATACGATT TTGTACCAGA
1851 GTCCTTTGAT CGTGACAAAA CAATTGCACT GATAATGAAT TCCTCTGGAT
1901 CTACTGGGTT ACCTAAGGGT GTGGCCCTTC CGCATAGAAC TGCCTGCGTC
1951 AGATTCTCGC ATGCCAGAGA TCCTATTTTT GGCAATCAAA TCATTCCGGA
2001 TACTGCGATT TTAAGTGTTG TTCCATTCCA TCACGGTTTT GGAATGTTTA
2051 CTACACTCGG ATATTTGATA TGTGGATTTT GAGTCGTCTT AATGTATAGA
2101 TTTGAAGAAG AGCTGTTTTT ACGATCCCTT CAGGATTACA AAATTCAAAG
2151 TGCGTTGCTA GTACCAACCC TATTTTCATT CTTCGCCAAA AGCACTCTGA
2201 TTGACAAATA CGATTTATCT AATTTACACG AAATTGCTTC TGGGGGCGCA
2251 CTTCTTTTCA AAGAAGTCGG GGAAGCGGTT GCAAAACGCT TCCATCTTCC
2301 AGGGATACGA CAAGGATATG GGCTCACTGA GACTACATCA GCTATTCTGA
2351 TTACACCCGA GGGGGATGAT AAACCGGGCG CGGTCGGTAA AGTTGTTCCA
2401 TTTTTTGAAG CGAAGGTTGT GGATCTGGAT ACCGGGAAAA CGCTGGGCGT
2451 TAATCAGAGA GGCGAATTAT GTGTCAGAGG ACCTATGATT ATGTCCGGTT
2501 ATGTAAACAA TCCGGAAGCG ACCAACGCCT TGATTGACAA GGATGGATGG
2551 CTACATTCTG GAGACATAGC TTACTGGGAC GAAGACGAAC ACTTCTTCAT
2601 AGTTGACCGC TTGAAGTCTT TAATTAAATA CAAAGGATAT CAGGTGGCCC
2651 CCGCTGAATT GGAATCGATA TTGTTACAAC ACCCCAACAT CTTGACGCG
2701 GGCGTGGCAG GTCTTCCCGA CGATGACGCC GGTGAACTTC CCGCCGCCGT
2751 TGTGTTTTTG GAGCACGGAA AGACGATGAC GAAAAAGAG ATCGTGGATT
2801 ACGTCGCCAG TCAAGTAACA ACCGCGAAAA AGTTGCGCGG AGGAGTTGTG
2851 TTTGTGGACG AAGTACCGAA AGGTCTTACC GGAAACTCG ACGCAAGAAA
2901 AATCAGAGAG ATCCTCATAA AGGCCAAGAA GGGCGGAAAG TCCAAATTGT
2951 AAAATGTAAC TGTATTCAGC GATGACGAAA TTCTTAGCTA TTGTAATGAC
3001 TACTAGAGAT CTTTGTGAAG GAACCTTACT TCTGTGGTGT GACATAATTG
3051 GACAAACTAC CTACAGAGAT TTAAAGCTCT AAGGTAAATA TAAAATTTTT
3101 AAGTGTATAA TGTGTTAAAC TACTGATTCT AATTGTTTGT GTATTTTAGA
3151 TTCCAACCTA TGAAGTATG GAATGGGAGC AGTGGTGGAA TGCCTTTAAT

```

Fig. 21

3201 GAGGAAAACC TGTTTTGCTC AGAAGAAATG CCATCTAGTG ATGATGAGGC
3251 TACTGCTGAC TCTCAACATT CTACTCCTCC AAAAAAGAAG AGAAAGGTAG
3301 AAGACCCCAA GGACTTTCCT TCAGAATTGC TAAGTTTTTTT GAGTCATGCT
3351 GTGTTTAGTA ATAGAACTCT TGCTTGCTTT GCTATTTACA CCACAAAGGA
3401 AAAAGCTGCA CTGCTATACA AGAAAATTAT GGAAAAATAT TCTGTAACCT
3451 TTATAAGTAG GCATAACAGT TATAATCATA ACATACTGTT FTTTCTTACT
3501 CCACACAGGC ATAGAGTGTC TGCTATTAAT AACTATGCTC AAAAATTGTG
3551 TACCTTTAGC TTTTAAATTT GTAAAGGGGT TAATAAGGAA TATTTGATGT
3601 ATAGTGCCCT GACTAGAGAT CATAATCAGC CATACCACAT TTGTAGAGGT
3651 TTTACTTGCT TTAAAAAACC TCCCACACCT CCCCTGAAC CTGAAACATA
3701 AAATGAATGC AATTGTTGTT GTTAACCTGT TTATTGCAGC TTATAATGGT
3751 TACAAATAAA GCAATAGCAT CACAAATTTT ACAAATAAAG CATTTTTTTC
3801 ACTGCATTCT AGTTGTGGTT TGTCCAAACT CATCAATGTA TCTTATCATG
3851 TCTGGATCCC CGGGTCCCTA TAGTGAGTCG TATTAGCTTG GCGTAATCAT
3901 GGTCAATAGCT GTTTCCTGTG TGAAATTGTT ATCCGCTCAC AATTCCACAC
3951 AACATACGAG CCGGAAGCAT AAAGTGTAAG GCCTGGGGTG CCTAATGAGT
4001 GAGCTAATGC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG
4051 GAAACCTGTC GTGCCAGCTG CATTAAATGAA TCGGCCAACG CGCGGGGAGA
4101 GGCGGTTTGC GTATTGGGCG CTCTTCCGCT TCTCGCTCA CTGACTCGCT
4151 GCGCTCGGTC GTTCGGCTGC GGCGAGCGGT ATCAGCTCAC TCAAAGGCGG
4201 TAATACGGTT ATCCACAGAA TCAGGGGATA ACGCAGGAAA GAACATGTGA
4251 GCAAAAGGCC AGCAAAAGGC CAGGAACCGT AAAAAAGCCG CGTTGCTGGC
4301 GTTTTTCCAT AGGCTCCGCC CCCCTGACGA GCATCACAAA AATCGACGCT
4351 CAAGTCAGAG GTGGCGAAAC CCGACAGGAC TATAAAGATA CCAGGCGTTT
4401 CCCCCGGA GCTCCCTCGT GCGCTCTCCT GTTCCGACCC TGCCGCTTAC
4451 CGGATACCTG TCCGCCTTTC TCCCTTCGGG AAGCGTGGCG CTTTCTCAAT
4501 GCTCAGCTG TAGGTATCTC AGTTCGGTGT AGGTCGTTTC CTCCAAGCTG
4551 GGCTGTGTGC ACGAACCCTC CGTTCAGCCC GACCGCTGCG CTTTATCCGG
4601 TAACTATCGT CTTGAGTCCA ACCCGGTAAG ACACGACTTA TCGCCACTGG
4651 CAGCAGCCAC TGGTAACAGG ATTAGCAGAG CGAGGTATGT AGGCGGTGCT
4701 ACAGAGTTCT TGAAGTGGTG GCCTAACTAC GGCTACACTA GAAGGACAGT
4751 ATTTGGTATC TGCGCTCTGC TGAAGCCAGT TACCTTCGGA AAAAGAGTTG
4801 GTAGCTCTTG ATCCGGCAAA CAAACCACCG CTGGTAGCGG TGGTTTTTTT
4851 GTTTGCAAGC AGCAGATTAC GCGCAGAAAA AAAGGATCTC AAGAAGATCC
4901 TTTGATCTTT TCTACGGGGT CTGACGCTCA GTGGAACGAA AACTCACGTT
4951 AAGGGATTTT GGTCAATGAG TTAATCAAAA GGATCTTCAC CTAGATCCTT
5001 TTAAATTAAT AATGAAGTTT TAAATCAATC TAAAGTATAT ATGAGTAAAC
5051 TTGGTCTGAC AGTTACCAAT GCTTAATCAG TGAGGCACCT ATCTCAGCGA
5101 TCTGTCTATT TCGTTCATCC ATAGTTGCCT GACTCCCCGT CGTGTAGATA
5151 ACTACGATAC GGGAGGGCTT ACCATCTGGC CCCAGTGCTG CAATGATACC
5201 GCGAGACCCA CGCTCACCAG CTCCAGATTT ATCAGCAATA AACCAGCCAG
5251 CCGGAAGGGC CGAGCGCAGA AGTGGTCCCT CAACTTTATC CGCCTCCATC
5301 CAGTCTATTA ATTGTTGCCG GGAAGCTAGA GTAAGTAGTT CGCCAGTTAA
5351 TAGTTTGCGC AACGTTGTTG CCATTGCTAC AGGCATCGTG GTGTCACGCT
5401 CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCCAACG ATCAAGGCGA
5451 GTTACATGAT CCCCCATGTT GTGCAAAAAA GCGGTTAGCT CCTTCGGTCC
5501 TCCGATCGTT GTCAGAAGTA AGTTGGCCGC AGTGTATATCA CTCATGGTTA
5551 TGGCAGCACT GCATAATTCT CTTACTGTCA TGCCATCCGT AAGATGCTTT
5601 TCTGTGACTG GTGAGTACTA AACCAAGTCA TTCTGAGAAT AGTGTATGCG
5651 GCGACCGAGT TGCTCTTGCC CGGCGTCAAT ACGGGATAAT ACCGCGCCAC
5701 ATAGCAGAAC TTTAAAAGTG CTCATCATTT GAAAACGTTT TCCGGGGCGA
5751 AAATCTCAA GGATCTTACC GCTGTTGAGA TCCAGTTCGA TGTAAACCAC
5801 TCGTGACACC AACTGATCTT CAGCATCTTT TACTTTCACC AGCGTTTCTG
5851 GGTGAGCAAA AACAGGAAGG CAAAATGCCG CAAAAAAGGG AATAAGGGCG
5901 ACACGGAAAT GTTGAATACT CATACTCTTC CTTTTTCAAT ATTATTGAAG
5951 CATTTATCAG GGTTATTGTC TCATGAGCGG ATACATATTT GAATGTATTT
6001 AGAAAAATAA ACAAATAGGG GTTCCGCGCA CATTTCCCCG AAAAGTGCCA
6051 CCTGACGTCT AAGAAACCAT TATTATCATG ACATTAACCT ATAAAAATAG
6101 GCGTATCACG AGGCCCTTTC GTCTCGCGCG TTTCCGGTGT GACGGTGAAA
6151 ACCTCTGACA CATGCAGCTC CCGGAGACGG TCACAGCTTG TCTGTAAGCG
6201 GATGCCGGGA GCAGACAAGC CCGTCAGGGC GCGTCAGCGG GTGTTGGCGG
6251 GTGTCGGGGC TGGCTTAACT ATGCGGCATC AGAGCAGATT GACTGAGAG
6301 TGCAACATAT GCGGTGTGAA ATACCGCACA GATGCGTAAG GAGAAAATAC
6351 CGCATCAGGC GCCATTCGCC ATTCAGGCTG CGCAACTGTT GGGAAAGGGC
6401 ATCGGTGCGG GCCTCTTCGG TATTACGCCA GCTGGCGAAA GGGGATGTG
6451 CTGCAAGGCG ATTAAGTTGG GTAACGCCAG GGTTTTCCCA GTCACGACGT
6501 TGTAAACGA CGGCCAGTGA ATTCGACCT GCAGtcgact ttttttatat

Fig. 21

6551 atacaggagg ccgag

0937453 092401

Fig. 21

pRetroOFF-E6E7 Length: 7840 June 10, 1999 12:21 Type: N Check: 5234

1 TCGAGTTTAC CACTCCCTAT CAGTGATAGA GAAAAGTGAA AGTCGAGTTT
51 ACCACTCCCT ATCAGTGATA GAGAAAAGTG AAAGTCGAGT TTACCACTCC
101 CTATCAGTGA TAGAGAAAGT GAAAGTCGAG TTTACCACTC CCTATCAGTG
151 ATAGAGAAAA GTGAAAGTCG AGTTTACCAC TCCCTATCAG TGATAGAGAA
201 AAGTGAAAGT CGAGTTTACC ACTCCCTATC AGTGATAGAG AAAAGTGAAG
251 TCGAGTTTAC CACTCCCTAT CAGTGATAGA GAAAAGTGAA AGTCGAGCTC
301 GGTACCCGGG TCGAGTAGGC GTGTACGGTG GGAGGCCTAT ATAAGCAGAG
351 CTCGTTTAGT GAACCGTCAG ATCGCCTGGA GACGCCATCC ACGCTGTTTT
401 GACCTCCATA GAAGACACCG GGACCGATCC AGCCTgcggc cgcagatcta
451 attcaccggt tagtataaaa gcagacattt tatgcaccaa aagagaactg
501 caatgtttca ggaccacacag gagcgaccca gaaagttacc acagttatgc
551 acagagctgc aaacaactat acatgatata atattagaat gtgtgtactg
601 caagcaacag ttactgcgac gtgaggtata tgactttgct tttcgggatt
651 tatgctatgt atatagagat gggaatccat atgctgtatg tgataaatgt
701 ttaaagtttt attctaaaat tagtgagtat agacattatt gttatagttt
751 gtatggaaca acattagaac agcaatacaa caaacggtt tgtgatttgt
801 taattaggtg tattaactgt caaaagccac tgtgtcctga agaaaagcaa
851 agacatctgg acaaaaagca aagattccat aatataaggg gtcggtggac
901 cggtcgatgt atgtcttgtt gcagatcatc aagaacacgt agagaaaccc
951 agctgtaatc atgcatggag atacacctac attgcatgaa tatatgttag
1001 atttgcaacc agagacaact gatctctact gttatgagca attaaatgac
1051 agctcagagg aggaggatga aatagatggt ccagctggac aagcagaacc
1101 ggacagagcc cattacaata ttgtaacctt ttgttgcaag tgtgactcta
1151 cgcttcgggt gtgctgtaaa tgggcacact aggaattgtg tgcccatct gttctcagaa
1201 gacctgttaa tgggcacact aggaattgtg tgcccatct gttctcagaa
1251 accataatct accatggtct atcctgcagg atccCCCGGG AACAACAACA
1301 ATTGCAATCA TTTTATGTTT CAGGTTGAGG GGGAGGTGTG GGAGGTTTTT
1351 TAAAGCAAGT AAAACCTCTA CAAATGTGGT ATGGCTGATT ATGATCCTGC
1401 AAGCCTCGTC GTCTGGCCGG ACCACGCTAT CTGTGCAAGG TCCCCGGACG
1451 CGCGCTCCAT GAGCAGAGCG TCGCGCCCCC TACCCACCGT ACTCGTCAAT
1501 TCCAAGGGCA TCGGTAAACA GAGCGCCGTA GGGGGCGGAG TCGTGGGGGG
1551 TAAATCCCGG ACCCGGGGAA TCCCCGTCCC CCAACATGTC CAGATCGAAA
1601 TCGTCTAGCG CGTCGGCATG CGCCATCGCC ACGTCTCTCGC CGTATAAGTG
1651 GAGCTCGTCC CCCAGGCTCA CATCGGTCGG GGGGGCCGTC GACAGTCTGC
1701 GCGTGTGTCC CCGGGGAGAA AGGACAGGCG CGGAGCCGCC AGCCCCGCCT
1751 CTTGCGGGGC GTGCTGCTCC GGGAGATCGA GCAGGCCCTC GATGGTAGAC
1801 CCGTAATTGT TTTTCGTACG CGCGCGGCTG TACGCGGACC CACTTTCACA
1851 TTTAAGTTGT TTTTCTAATC CGCATATGAT CAATTCAAGG CCGAATAAGA
1901 AGGCTGGCTC TGCACCTTGG TGATCAAATA ATTCGATAGC TTGTCGTAAT
1951 AATGGCGGCA TACTATCAGT AGTAGGTGTT TCCCTTTCTT CTTTAGCGAC
2001 TTGATGCTCT TGATCTTCCA ATACGCAACC TAAAGTAAAA TGCCCCACAG
2051 CGCTGAGTGC ATATAATGCA TTCTCTAGTG AAAAACCTTG TTGGCATAAA
2101 AAGGCTAATT GATTTTCGAG AGTTTCATAC TGTTTTTCTG TAGGCCGTGT
2151 ACCTAAATGT ACTTTTGCTC CATCGCGATG ACTTAGTAAA GCACATCTAA
2201 AACTTTTAGC GTTATTACGT AAAAAATCTT GCCAGCTTTC CCCTTCTAAA
2251 GGGCAAAAGT GAGTATGGTG CCTATCTAAC ATCTCAATGG CTAAGGCGTC
2301 GAGCAAAGCC CGCTTATTTT TTACATGCCA ATACAATGTA GGCTGCTCTA
2351 CACCTAGCTT CTGGGCGAGT TTACGGGTTG TTAAACCTTC GATTCCGACC
2401 TCATTAAGCA GCTCTAATGC GCTGTTAATC ACTTTACTTT TATCTAATCT
2451 AGACATGGTG GAAGCTTTTT GCAAAAGCCT AGGCCTCCAA AAAAGCCTCC
2501 TCACCTATTC TGGAATAGCT CAGAGGCCGA GGCGGCCTCG GCCTCTGCAT
2551 AAATAAAAAA AATTAGTCAG CCATGGGGCG GAGAATGGGC GGAAGTGGGC
2601 GGAGTTAGGG GCGGGATGGG CGGAGTTAGG GGCGGGACTA TGGTTGCTGA
2651 CTAATTGAGA TGCATGCTTT GCATACTTCT GCCTGCTGGG GAGCCTGGGG
2701 ACTTTCCACA CCTGGTTGCT GACTAATTGA GATGCATGCT TTGCATACTT
2751 CTGCCTGCTG GGGAGCCTGG GGACTTTCCA CACCTAACT GACACACATT
2801 CCACAGGTCG ACTAGATCGA ATTCTCAATT GTTTTACGCG GCCCGATGCA
2851 TGGGGTTCGT CGCTCCTTTC GGTGCGGCGC TGCGGGTCGT GGGGCGGGCG
2901 TCAGGCACCG GGCTTGCGGG TCATGACCCA GGTGCGCGCG TCCTTCGGGC
2951 ACTCGACGTC GCGCGTGACG GTGAAGCCGA GCCGCTCGTA GAAGGGGAGG
3001 TTGCGGGGCG CGGAGTCTC CAGGAAGCG GGCACCCCGG CGCGCTCGGC
3051 CGCCTCCACT CCGGGGAGCA CGACGGCGCT GCCCAGACCC TTGCCCTGGT
3101 GGTGCGGGCG GACGCCGACG GTGGCCAGGA ACCACGCGGG CTCCTTGGGC
3151 CGGTGCGGCG CCAGGAGGCC TTCCATCTGT TGCTGCGCGG CCAGCCGGGA

Fig. 22

3201 ACCGCTCAAC TCGGCCATGC GCGGGCCGAT CTCGGCGAAC ACCGCCCCCG
3251 CTTCCGACGCT CTCCGGCGTG GTCCAGACCG CCACCGCGGC GCCGTCTGTC
3301 GCGACCCACA CCTTGCCGAT GTCGAGCCCG ACGCGCGTGA GGAAGAGTTC
3351 TTGCAGCTCG GTGACCCGCT CGATGTGGCG GTCCGGATCG ACGGTGTGGC
3401 GCGTGGCGGG GTAGTCGGCG AACGCGGCGG CGAGGGTGGG TACGGCCCTG
3451 GGGACGTCGT CGCGGGTGGC GAGGCGCACC GTGGGCTTGT ACTCGGTCAT
3501 GGTAAAGCTGA TCCGGCCGCG GCCTAGAGAA GGAGTGAGGG CTGGATAAAG
3551 GGAGGATTGA GCGGGGGTCG AAAGAGGAGG TTCAAGGGGG AGAGACGGCG
3601 CGGATGGAAG AAGAGGAGGC GGAGGCTTAG GGTGTACAAA GGGCTTGACC
3651 CAGGGAGGGG GGTCAAAAGC CAAGGCTTCC CAGGTCACGA TGTAGGGGAC
3701 CTGGTCTGGG TGTCATGCG GGCCAGGTGA AAAGACCTTG ATCTTAACCT
3751 GGGTGATGAG GTCTCGGTTA AAGGTGCCGT CTCGCGGCCA TCCGACGTTA
3801 AAGGTTGGCC ATTCTGCAGA GCAGAAGGTA ACCCAACGTC TCTTCTTGAC
3851 ATCTACCGAC TGGTGTGAG CGAGCCGCTC GACATCTTTC CAGTGATCTA
3901 AGGTCAAAC TAAGGGAGTG GTAACAGTCT GGCCCTAATT TTCAGACAAA
3951 TACAGAAACA CAGTCAGACA GAGACAACAC AGAACGATGC TGCAGCAGAC
4001 AAGACGCGCG GCTTCGGTTC CAAACCGAAA GCAAAAATTC AGACGGAGGC
4051 GGGAAGTGT TTAGGTTCTC GTCTCCTACC AGAACCACAT ATCCTGACGG
4101 GGTCGGATT CACATCGACT CCCTTCCTCA GGTCGGGCCA CAAAAACGGC
4151 CCCCAGAGTC CCTGGGACGT CTCCAGGGT TCGCGCCGGG TGTTGAGAAC
4201 TCGTCAGTTC CACCACGGGT CCGCCAGATA CAGAGCTAGT TAGCTAACTA
4251 GTACCGACGC AGGCGCATAA AATCAGTCAT AGACACTAGA CAATCGGACA
4301 GACACAGATA AGTTGCTGCG CAGCTTACCT CCCGGTGGTG GGTCTGGTGT
4351 CCCTGGGCAG GGGTCTCCCG ATCCCGGACG AGCCCCCAA TGAAAGACCC
4401 CCGCTGACGG GTAGTCAATC ACTCAGAGGA GACCCTCCA AGGAACAGCG
4451 AGACCACAAG TCGGATGCAA CTGCAAGAGG GTTTATTGGA TACACGGGTA
4501 CCCGGGCGAC TCAGTCAATC GGAGGACTGG CGCCCCGAGT GAGGGGTGT
4551 GGGCTCTTTT ATTGAGCTCG GGGAGCAGAA GCGCGCGAAC AGAAGCGAGA
4601 AGCGAACTGA TTGGTTAGTT CAAATAAGGC ACAGGGTCAT TTCAGGTCCT
4651 TGGGGCACCC TGGAAACATC TGATGGTTCT CTAGAACTG CTGAGGGCTG
4701 GACCGCATCT GGGGACCATC TGTTCTTGGC CCTGAGCCGG GGCAGGAACCT
4751 GCTTACCACA GATATCCTGT TTGGCCATA TTCAGCTGTT CCATCTGTTT
4801 TTGGCCCTGA GCCGGGGCAG GAAGTCTTA CCACAGATAT CCTGTTTGGC
4851 CCATATTGAG CGTCAGGTG GCACTTTTCG GGGAAATGTG CGCGGAACCC
4901 CTATTTGTTT ATTTTCTAA ATACATTCAA ATATGTATCC GCTCATGAGA
4951 CAATAACCTT GATAAATGCT TCAATAATAT TGAAAAAGGA AGAGTATGAG
5001 TATTCAACAT TTCCGTGTG CCCTTATTCC CTTTTTTGCG GCATTTTGGC
5051 TTCCTGTTTT TGCTACCCA GAAACGCTGG TGAAAGTAAA AGATGCTGAA
5101 GTCAGTTGG GTGACGAGT GGGTTACATC GAACTGGATC TCAACAGCGG
5151 TAAGATCCTT GAGAGTTTTC GCCCGAAGA ACGTTTTCCA ATGATGAGCA
5201 CTTTTAAAGT TCTGCTATGT GCGCGGTAT TATCCCGTGT TGACGCCGGG
5251 CAAGAGCAAC TCGGTCGCCG CATACTAT TCTCAGAATG ACTTGTTGA
5301 GTACTACCA GTCACAGAAA AGCATCTTAC GGATGGCATG ACAGTAAGAG
5351 AATTATGCAG TGCTGCCATA ACCATGAGTG ATAACACTGC GGCCAACCTA
5401 CTTCTGACAA CGATCGGAGG ACCGAAGGAG CTAACCGCTT TTTTGACAA
5451 CATGGGGGAT CATGTAATC GCCTTGATCG TTGGGAACCG GAGCTGAATG
5501 AAGCCATACC AAACGACGAG CGTGACACCA CGATGCCTGT AGCAATGGCA
5551 ACAACGTTGC GCAAACTATT AACTGGCGAA CTAATTACTC TAGCTTCCCG
5601 GCAACAATTA ATAGACTGGA TGGAGGCGGA TAAAGTTGCA GGACCACTTC
5651 TGCGCTCGGC CCTTCCGGCT GGCTGGTTTA TGCTGATAA ATCTGGAGCC
5701 GGTGAGCGTG GGTCTCGCGG TATCATTGCA GCACTGGGGC CAGATGGTAA
5751 GCCCTCCCGT ATCGTAGTTA TCTACACGAC GGGGAGTCAG GCAACTATGG
5801 ATGAACGAAA TAGACAGATC GCTGAGATAG GTGCCTCACT GATTAAGCAT
5851 TGGTAACGT CAGACCAAGT TTAATTTTAA TTAATTTTAA AGGATCTAGG TGAAGATCCT
5901 GCGGCGCGCA AACTTCATTT TTAATTTTAA AGGATCTAGG TGAAGATCCT
5951 TTTTGATAAT CTCATGACCA AAATCCCTTA ACGTGAGTTT TCGTTCCACT
6001 GAGCGTCAGA CCCCAGTAGA AAGATCAAAG GATCTTCTTG AGATCCTTTT
6051 TTTCTGCGCG TAATCTGCTG CTTGCAAACA AAAAAACCAC CGCTACCAGC
6101 GGTGGTTTGT TTGCCGGATC AAGAGCTACC AACTCTTTT CCGAAGGTAA
6151 CTGGCTTCAG CAGAGCGCAG ATACCAAATA CTGTCTTCT AGTGTAGCCG
6201 TAGTTAGGCC ACCACTTCAA GAACTCTGTA GCACCGCCTA CATACTCGC
6251 TCTGCTAATC CTGTTACCAG TGGCTGCTGC CAGTGGCGAT AAGTCGTGTC
6301 TTACCGGGTT GGAATCAAGA CGATAGTTAC CGGATAAGGC GCAGCGGTGCG
6351 GGCTGAACGG GGGGTTCTGT CACACAGCCC AGCTTGGAGC GAACGACCTA
6401 CACCGAAGTG AGATACCTAC AGCGTGAGCT ATGAGAAAGC GCCACGCTTC
6451 CCGAAGGGAG AAAGGCGGAC AGGTATCCGG TAAGCGCGAG GGTGGAACA
6501 GGAGAGCGCA CGAGGGAGCT TCCAGGGGGA AACGCTGGT ATCTTTATAG

6551 TCCTGTCGGG TTTCGCCACC TCTGACTTGA GCGTCGATTT TTGTGATGCT
6601 CGTCAGGGGG GCGGAGCCTA TGGAAAAACG CCAGCAACGC GGCCTTTTTTA
6651 CGGTTCTTGG CCTTTTGCTG GCCTTTTGCT CACATGTTCT TTCCTGCGTT
6701 ATCCCCTGAT TCTGTGGATA ACCGTATTAC CGCCTTTGAG TGAGCTGATA
6751 CCGCTCGCCG CAGCCGAACG ACCGAGCGCA GCGAGTCAGT GAGCGAGGAA
6801 GCGGAAGAGC GCCAATACGC AAACCGCCTC TCCCCGCGCG TTGGCCGATT
6851 CATTAATGCA ACTATGGCCA TTTAATGTAA ATACTTAAGA AAAAAACCA
6901 AATTAATTTT GATACATGCT GCATGTGAAG ACCCCCGCTG ACGGGTAGTC
6951 AATCACTCAG AGGAGACCTT CCCAAGGCAG CGAGACCACA AGTCGGAAAT
7001 GAAAGACCCC CGCTGACGGG TAGTCAATCA CTCAGAGGAG ACCCTCCCAA
7051 GGAACAGCGA GACCACAAGT CGGATGCAAC TGCAAGAGGG TTTATTGGAT
7101 ACACGGGTAC CCGGGCGACT CAGTCAATCG GAGGACTGGC GCCCCGAGTG
7151 AGGGGTGTGT GGCTCTTTTA TTGAGCTCGG GGAGCAGAAG CGCGCGAACA
7201 GAAGCGAGAA GCGAACTGAT TGGTTAGTTC AAATAAGGCA CAGGGTCATT
7251 TCAGGTCCTT GGGGCACCTT GGAAACATCT GATGGTTCTC TAGAAACTGC
7301 TGAGGGCTGG ACCGCATCTG GGGACCATCT GTTCTTGGCC CTGAGCCGGG
7351 GCAGGAAGT CTTACCACAG ATATCCTGTT TGGCCCATAT TCAGCTGTTT
7401 CATCTGTTCT TGGCCCTGAG CCGGGGCAGG AACTGCTTAC CACAGATATC
7451 CTGTTTGGCC CATATTCAGC TGTTCCATCT GTTCTTGACC TTGATCTGAA
7501 CTTCTCTATT CTCAGTTATG TATTTTTCCA TGCCTTGCAA AATGGCGTTA
7551 CTTAAGCTAG CAGATCTGCT AGCTTGCCAA ACCTACAGGT GGGGTCTTTC
7601 ATCCCCCCT TTTTCTGGAG ACTAAATAAA ATCTTTTATT TTATGCGCAC
7651 ATTTCCCCGA AAAGTGCCAC CTGACGTCTA AGAAACCATT ATTATCATGA
7701 CATTAACCTA TAAAAATAGG CGTATCACGA GGCCCTTTCG TCCGCACATT
7751 TCCCCGAAAA GTGCCACCTG ACGTCTAAGA AACCATTATT ATCATGACAT
7801 TAACCTATAA AAATAGGCGT ATCACGAGGC CCTTTCGTCC

Fig. 22

pRetroOFF-U19tsa58 Length: 8852

```

1   TCGAGTTTAC CACTCCCTAT CAGTGATAGA GAAAAGTGAA AGTCGAGTTT
51  ACCACTCCCT ATCAGTGATA GAGAAAAGTG AAAGTCGAGT TTACCACTCC
101 CTATCAGTGA TAGAGAAAGT GAAAGTCGAG TTTACCACTC CCTATCAGTG
151 ATAGAGAAAA GTGAAAAGTCG AGTTTACCAC TCCCTATCAG TGATAGAGAA
201 AAGTGAAAGT CGAGTTTACC ACTCCCTATC AGTGATAGAG AAAAGTGAAG
251 TCGAGTTTAC CACTCCCTAT CAGTGATAGA GAAAAGTGAA AGTCGAGCTC
301 GGTACCCGGG TCGAGTAGGC GTGTACGGTG GGAGGCCAT ATAGCAGAG
351 CTCGTTTAGT GAACCGTCAG ATCGCCTGGA GACGCCATCC ACGCTGTTTT
401 GACCTCCATA GAAGACACCG GGACCGATCC AGCCTGCGGC CGCTTAATTA
451 AGTTTAAACG GATCCxxxxx xxxxxxatgc catctagtga tgatgaggct
501 actgctgact ctcaacattc tactcctcca aaaaagaaga gaaaggtaga
551 agaccccaag gactttcctt cagaattgct aagttttttg agtcatgctg
601 tgtttagtaa tagaactctt gcttgctttg ctatttacac cacaaaggaa
651 aaagctgcac tgctatacaa gaaaattatg gaaaaatatt ctgtaacctt
701 tataagtagg cataacagtt ataatacata catactgttt tttcttactc
751 cacacaggca tagagtgtct gctattaata actatgctca aaaattgtgt
801 accttagctt ttttaatttg taaaggggtt aataaggaat atttgatgta
851 tagtgccttg actagagatc cattttctgt tattgaggaa agtttgccag
901 gtgggttaaa ggagcatgat ttaataccag aagaagcaga ggaaactaaa
951 caagtgtcct ggaagcttgt aacagagtat gcaatggaaa caaatgtga
1001 tgatgtgttg ttattgtctg ggatgtactt ggaatttcag tacagttttg
1051 aaatgtgttt aaatgtattt aaaaaagaac agcccagcca ctataagtac
1101 catgaaaagc attatgcaaa tgctgctata tttgctgaca gcaaaaacca
1151 aaaaaccata tgccaacagg ctggttgatac tgtttagctt aaaaagcggg
1201 ttgatagcct acaattaact agagaacaaa tgtaaacaaa cagatttaat
1251 gatcttttgg ataggatgga tataatgttt ggttctacag gctctgctga
1301 catagaagaa tggatggctg gagttgcttg gctacactgt ttggtgcccc
1351 aaatggattc agtgggtgat gactttttta aatgcatggt gtacaacatt
1401 cctaaaaaaa gatactggct gtttaaagga ccaattgata gtggtaaaac
1451 tacattagca gctgctttgc ttgaattatg tggggggaaa gctttaaatg
1501 ttaatttggc cttggacagg ctgaactttg agctaggagt agctattgac
1551 cagtttttag tagtttttga ggatgtaaaag ggcactggag gggagtccag
1601 agatttgcct tcagggtcagg gaattaataa cctggacaat ttaagggatt
1651 atttggtatg cagtgttaag gtaaacttag aaaagaaaca cctaaataaa
1701 agaactcaaa tatttcccc tggaatagtc accatgaatg agtacagtgt
1751 gcctaaaaca ctgcaggcca gatttgtaaa acaaatagat tttaggcccc
1801 aagattattt aaagcattgc ctggaacgca gtgagttttt gttagaaaag
1851 agaataattc aaagtggcat tgctttgctt cttatgttaa tttggtacag
1901 acctgtggct gagtttgctc aaagtattca gagcagaatt gtggagtgga
1951 aagagagatt ggacaaagag tttagtttgt cagtgtatca aaaaatgaag
2001 tttaatgtgg ctatgggaat tggagtttta gattggctaa gaaacagtga
2051 tgatgatgat gaagacagcc aggaaaatgc tgataaaaat gaagatggtg
2101 gggagaagaa catggaagac tcagggcagt aaacaggcat tgattcacag
2151 tccaaggctt catttcaggc ccctcagtc tcacagtcgt ttcagatca
2201 taatcagcca taccacattt gtagagggtt tacttgcttt aaaaaacctc
2251 ccacacctcc ccctgaacct gaaacataax xxxxxxxxxxxx ggatccCCCG
2301 GGAACAACAA CAATTGCATT CATTTTATGT TTCAGGTTCA GGGGGAGGTG
2351 TGGGAGGTTT TTAAAGCAA GTAAAACCTC TACAAATGTG GTATGGCTGA
2401 TTATGATCCT GCAAGCCTCG TCGTCTGGCC GGACCACGCT ATCTGTGCAA
2451 GGTCCCCGGA CGCGCGCTCC ATGAGCAGAG CGTCGCGCCC CCTACCCACC
2501 GTACTCGTCA ATTCCAAGGG CATCGGTAAA CAGAGCGCCG TAGGGGGCGG
2551 AGTCGTGGGG GGTAAATCCC GGACCCGGGG AATCCCCGTC CCCCAACATG
2601 TCCAGATCGA AATCGTCTAG CGCGTCGGCA TGCGCCATCG CCACGTCTCT
2651 GCCGTATAAG TGGAGCTCGT CCCCCAGGCT GACATCGGTC GGGGGGGCCG
2701 TCGACAGTCT GCGCGTGTGT CCGCGGGGAG AAAGGACAGG CGCGGAGCCG
2751 CCAGCCCCGC CTCTTCGGGG GCGTCGTCGT CCGGGAGATC GAGCAGGCC
2801 TCGATGGTAG ACCCGTAATT GTTTTTCTGA CGCGCGCGGC TGTACGCGGA
2851 CCCATTTCAT CATTAAAGTT GTTTTTCTAA TCCGCATATG ATCAATTCAA
2901 GGCCGAATAA GAAGGCTGGC TCTGCACCTT GGTGATCAAA TAATTTCGATA
2951 GCTTGTCGTA ATAATGGCGG CATACTATCA GTAGTAGGTG TTTCCCTTTC
3001 TTCTTTAGCG ACTTGATGCT CTTGATCTTC CAATACGCAA CCTAAAGTAA
3051 AATGCCCCAC AGCGCTGAGT GCATATAATG CATTCTCTAG TGAAAAACCT
3101 TGTTGGCCAT AAAAGGCTAA TTGATTTTCG AGAGTTTCAT ACTGTTTTTC
3151 TGTAGGCCGT GTACCTAAAT GTACTTTTGC TCCATCGCGA TGACTTAGTA
3201 AAGCACATCT AAAACTTTTA GCGTTATTAC GTAAAAATC TTGCCAGCTT

```

Fig. 23

3251 TCCCCTTCTA AAGGGCAAAA GTGAGTATGG TGCCTATCTA ACATCTCAAT
3301 GGGTAAGGCG TCGAGCAAAG CCCGCTTATT TTTTACATGC CAATACAATG
3351 TAGGCTGCTC TACACCTAGC TTCTGGGCGA GTTTACGGGT TGTTAAACCT
3401 TCGATTCCGA CCTCATTAAAG CAGCTCTAAT GCGCTGTTAA TCACTTTACT
3451 TTTATCTAAT CTAGACATGG TGGAAAGCTTT TTGCAAAAGC CTAGGCCTCC
3501 AAAAAAGCCT CCTCACTACT TCTGGAATAG CTCAGAGGCC GAGGCGGCCT
3551 CGGCCTCTGC ATAAATAAAA AAAATTAGTC AGCCATGGGG CGGAGAATGG
3601 GCGGAAGTGG GCGGAGTTAG GGGCGGGATG GCGGAGTTA GGGGCGGGAC
3651 TATGGTTGCT GACTAATTGA GATGCATGCT TTGCATACTT CTGCCTGCTG
3701 GGGAGCCTGG GGACTTTCCA CACCTGGTTG CTGACTAATT GAGATGCATG
3751 CTTTGCATAC TTCTGCCTGC TGGGGAGCCT GGGGACTTTC CACACCCTAA
3801 CTGACACACA TTCCACAGGT CGACTAGATC GAATTCTCAA TTGTTTTACG
3851 CGGCCCCGATG CATGGGGTCG TGCCTCCTT TCGGTCGGGC GCTGCGGGTC
3901 GTGGGGCGGG CGTCAGGCAC CGGGCTTGCG GGTTCATGCAC CAGGTGCGCG
3951 GGTCTTTCGG GCACTCGACG TCGGCGGTGA CGGTGAAGCC GAGCCGCTCG
4001 TAGAAGGGGA GGTTCGGGG CGCGGAGGTC TCCAGGAAGG CGGGCACCCC
4051 GCGCGCTCG GCCGCTCCA CTCCGGGGAG CACGACGGCG CTGCCCAGAC
4101 CCTTGCCCTG GTGGTCGGGC GAGACGCCGA CGGTGGCCAG GAACCACGCG
4151 GGCTCCTTGG GCCGTGCGG CGCCAGGAGG CCTTCCATCT GTTGCTGCGC
4201 GGCCAGCCGG GAACCGCTCA ACTCGGCCAT GCGCGGGCCG ATCTCGGCGA
4251 ACACCGCCCC CGCTCGACG CTCTCCGGCG TGGTCCAGAC CGCCACCGCG
4301 GCGCCGCTCG CCGCCACCCA CACCTTGCCG ATGTCGAGCC CGACGCGCGT
4351 GAGGAAGAGT TCTTGCAGCT CGGTGACCCG CTCGATGTGG CCGTCCGGAT
4401 CGACGGTGTG GCGCTGGCG GGGTAGTCGG CGAACGCGGC GGCGAGGGTG
4451 CGTACGGCCC TGGGGACGTC GTCGCGGGTG GCGAGGCGCA CCGTGGGCTT
4501 GTACTCGGTC ATGGTAAGCT GATCCGGCCG GCGCCTAGAG AAGGAGTGAG
4551 GGCTGGATAA AGGGAGGATT GAGGCGGGGT CGAAAGAGGA GGTTCAAGGG
4601 GGAGAGACGG CGCGGATGGA AGAAGAGGAG GCGGAGGCTT AGGGTGTACA
4651 AAGGGCTTGA CCCAGGGAGG GGGGTCAAAA GCCAAGGCTT CCCAGGTCAC
4701 GATGTAGGGG ACCTGGTCTG GGTGTCCATG CGGGCCAGGT GAAAAGACCT
4751 TGATCTTAAC CTGGGTGATG AGGTCTCGGT TAAAGGTGCC GTCTCGCGGC
4801 CACTCCGACG TAAAGGTTGG CCATTCTGCA GAGCAGAAGG TAACCCAACG
4851 TCTCTTCTTG ACATCTACCG ACTGGTTGTG AGCGAGCCGC TCGACATCTT
4901 TCCAGTGATC TAAGGTCAAA CTTAAGGGAG TGGTAACAGT CTGGCCCTAA
4951 TTTTCAGACA AATACAGAAA CACAGTCAGA CAGAGACAAC ACAGAACGAT
5001 GCTGCAGCAG ACAAGACGCG CGGCTTCGGT TCCAAACCGA AAGCAAAAAT
5051 TCAGACGGAG GCGGGAATG TTTTAGGTTT TCGTCTCCTA CCAGAACCAC
5101 ATATCAGTAC GGGGTCCGAT TCCACATCGA CTCCTTTCCT CAGGTGCGGC
5151 CACAAAACG GCCCCCAAAG TCCCTGGGAC GTCTCCAGG GTTGCGGGCG
5201 GGTGTTTACA ACTCGTCAGT TCCACCACGG GTCCGCCAGA TACAGAGCTA
5251 GTTAGCTAAC TAGTACCGAC GCAGGCGCAT AAAATCAGTC ATAGACACTA
5301 GACAATCGGA CAGACACAGA TAAGTTGCTG GCCAGCTTAC CTCCCGGTGG
5351 TGGGTCGGTG GTCCCTGGG AGGGGTCTCC CGATCCCGGA CGAGCCCCCA
5401 AATGAAAGAC CCCCGCTGAC GGGTAGTCAA TCACTCAGAG GAGACCCTCC
5451 CAAGGAACAG CGAGACCACA AGTCGGATGC AACTGCAAGA GGGTTTATTG
5501 GATACACGGG TACCCGGGCG ACTCAGTCAA TCGGAGGACT GGCGCCCCGA
5551 GTGAGGGGTT GTGGGCTCTT TTATTGAGCT CGGGGAGCAG AAGCGCGCGA
5601 ACAGAAGCGA GAAGCGAAT GATTGGTTAG TTCAAATAAG GCACAGGGTC
5651 ATTTCAAGTC CTGGGGCAC CCTGGAACA TCTGATGGTT CTCTAGAAAC
5701 TGCTGAGGGC TGGACCGCAT CTGGGGACCA TCTGTTCTTG GCCCTGAGCC
5751 GGGGACAGAA CTGCTTACCA CAGATATCCT GTTTGGCCCA TATTAGCTG
5801 TTCCATCTGT TCTTGGCCCT GAGCCGGGGC AGGAACTGCT TACCACAGAT
5851 ATCCTGTTTG GCCCATATTC AGGCTGCAGG TGGCACTTTT CGGGGAAATG
5901 TGCAGCGAAC CCTATTGT TTATTTTCT AAATACATTC AAATATGTAT
5951 CCGCTCATGA GACAATAACC CTGATAAATG CTTCAATAAT ATTGAAAAAG
6001 GAAGAGTATG AGTATTCAAC ATTTCCGTGT CGCCCTTATT CCCTTTTTTG
6051 CGGCATTTTG CCTTCTGTT TTTGCTCACC CAGAAACGCT GGTGAAAGTA
6101 AAAGATGCTG AAGATCAGTT GGGTGCACGA GTGGGTACA TCGAACTGGA
6151 TCTCAACAGC GGTAAAGTCC TTGAGAGTTT TCGCCCCGAA GAACGTTTTT
6201 CAATGATGAG CACTTTTAAA GTTCTGCTAT GTGGCGCGGT ATTATCCCGT
6251 GTTGACGCCG GGCAAGAGCA ACTCGGTGCG CGCATACACT ATTCTCAGAA
6301 TGACTTGGTT GAGTACTCAC CAGTCACAGA AAAGCATCTT ACGGATGGCA
6351 TGACAGTAAG AGAATTATGC AGTGCTGCCA TAACCATGAG TGATAAAGT
6401 GCGGCCAAT TACTTCTGAC AACGATCGGA GGACCGAAG AGCTAACCGC
6451 TTTTTTGCAC AACATGGGG ATCATGTAAC TCGCCTTGAT CGTTGGGAAC
6501 CGGAGCTGAA TGAAGCCATA CCAAACGAC AGCGTGACAC CACGATGCCT
6551 GTAGCAATGG CAACAACGTT GCGCAAACTA TTAAGTGGCG AACTACTTAC

Fig. 23

6601 TCTAGCTTCC CGGCAACAAT TAATAGACTG GATGGAGGCG GATAAAGTTG
6651 CAGGACCACT TCTGCGCTCG GCCCTTCCGG CTGGCTGGTT TATTGCTGAT
6701 AAATCTGGAG CCGGTGAGCG TGGGTCTCGC GGTATCATTG CAGCACTGGG
6751 GCCAGATGGT AAGCCCTCCC GTATCGTAGT TATCTACACG ACGGGGAGTC
6801 AGGCAACTAT GGATGAACGA AATAGACAGA TCGCTGAGAT AGGTGCCTCA
6851 CTGATTAAGC ATTGGTAACT GTCAGACCAA GTTTACTCAT ATATACTTTA
6901 GATTGATTTG GCGCCGGCCG CAAACTTCAT TTTTAATTTA AAAGGATCTA
6951 GGTGAAGATC CTTTTTGATA ATCTCATGAC CAAAATCCCT TAACGTGAGT
7001 TTTCGTTCCA CTGAGCGTCA GACCCCGTAG AAAAGATCAA AGGATCTTCT
7051 TGAGATCCTT TTTTCTGCG CGTAATCTGC TGCTTGCAA CAAAAAACC
7101 ACCGCTACCA GCGGTGGTTT GTTTGCCGGA TCAAGAGCTA CCAACTCTTT
7151 TTCCGAAGGT AACTGGCTTC AGCAGAGCGC AGATACCAA TACTGTCCTT
7201 CTAGTGTAGC CGTAGTTAGG CCACCACTTC AAGAACTCTG TAGCACC GCC
7251 TACATACCTC GCTCTGTAA TCCTGTTACC AGTGGCTGCT GCCAGTGGCG
7301 ATAAGTCGTG TCTTACCGGG TTGGACTCAA GACGATAGTT ACCGGATAAG
7351 GCGCAGCGGT CGGGCTGAAC GGGGGGTTG TGCACACAGC CCAGCTTGGA
7401 GCGAACGACC TACACCGAAC TGAGATACCT ACAGCGTGAG CTATGAGAAA
7451 GCGCCACGCT TCCCGAAGGG AGAAAGGCGG ACAGGTATCC GGTAAAGCGGC
7501 AGGGTCGAA CAGGAGAGCG CACGAGGGAG CTTCCAGGGG GAAACGCCTG
7551 GTATCTTTAT AGTCCTGTCG GGTTTCGCCA CCTCTGACTT GAGCGTCGAT
7601 TTTTGTGATG CTCGTGAGGG GGGCGGAGCC TATGGAAAAA CGCCAGCAAC
7651 GCGGCCCTTT TACGGTTCCT GGCCTTTTGC TGGCCTTTTG CTCACATGTT
7701 CTTTCCTGCG TTATCCCCTG ATTCTGTGGA TAACCGTATT ACCGCCTTTG
7751 AGTGAGCTGA TACCGCTCGC CGCAGCCGAA CGACCGAGCG CAGCGAGTCA
7801 GTGAGCGAGG AAGCGGAAGA GCGCCAATAC GCAAACCGCC TCTCCCCGCG
7851 CGTTGGCCGA TTCATTAATG CAACTATGGC CATTTAATGT AAATACTTAA
7901 GAAAAAAAC CAAATTAATT TTGATACATG CTGCATGTGA AGACCCCCCG
7951 TGACGGGTAG TCAATCACTC AGAGGAGACC CTCCCAAGGC AGCGAGACCA
8001 CAAGTCGGAA ATGAAAGACC CCCGCTGACG GGTAGTCAAT CACTCAGAGG
8051 AGACCCTCCC AAGGAACAGC GAGACCACAA GTCGGATGCA ACTGCAAGAG
8101 GGTTTATTGG ATACACGGGT ACCCGGGCGA CTCAGTCAAT CGGAGGACTG
8151 GCGCCCCGAG TGAGGGGTTG TGGGCTCTTT TATTGAGCTC GGGGAGCAGA
8201 AGCGCGCGAA CAGAAGCGAG AAGCGAACTG ATTGGTTAGT TCAAATAAGG
8251 CACAGGGTCA TTTCAGGTCC TTGGGGCACC CTGGAAACAT CTGATGGTTC
8301 TCTAGAACT GCTGAGGGCT GGACCGCATC TGGGGACCAT CTGTTCTTGG
8351 CCCTGAGCCG GGGCAGGAAC TGCTTACCAC AGATATCCTG TTTGGCCCAT
8401 ATTCAGCTGT TCCATCTGTT CTTGGCCCTG AGCCGGGGCA GGAAGTCTT
8451 ACCACAGATA TCCTGTTTGG CCCATATTCA GCTGTTCCAT CTGTTCTTGA
8501 CCTTGATCTG AACTTCTCTA TTCTCAGTTA TGTATTTTTT CATGCCTTGC
8551 AAAATGGCGT TACTTAAGCT AGCAGATCTG CTAGCTTGCC AAACCTACAG
8601 GTGGGGTCTT TCATTCCCCC CTTTTTCTGG AGACTAAATA AAATCTTTTA
8651 TTTTATGCGC ACATTTCACC GAAAAGTGCC ACCTGACGTC TAAGAAACCA
8701 TTATTATCAT GACATTAACC TATAAAAATA GCGGTATCAC GAGGCCCTTT
8751 CGTCCGCACA TTTCCCCGAA AAGTGCCACC TGACGTCTAA GAAACCATTA
8801 TTATCATGAC ATTAACCTAT AAAAATAGGC GTATCACGAG GCCCTTTCGT
8851 CC

Fig. 23

puhd10-3-hIL3 Length: 3621

```

1  ctcgagtttta ccactcccta tcagtgatag agaaaagtga aagtcgagtt
51  taccactccc tatcagtgat agagaaaagt gaaagtcgag tttaccactc
101 cctatcagtg atagagaaaa gtgaaaagtcg agtttaccac tccctatcag
151 tgatagagaaa aagtgaaggt cgagtttacc actccctatc agtgatagag
201 aaaagtgaata gtcgagtttta ccactcccta tcagtgatag agaaaagtga
251 aagtcgagttt taccactccc tatcagtgat agagaaaagt gaaagtcgag
301 ctcggtacccc gggtcgagta ggcgtgtacg gtgggaggcc tatataagca
351 gagctcgttt agtgaaccgt cagatcgctt ggagacgcca tccacgctgt
401 tttgacctcc atagaagaca ccgggaccga tccagcctcc gcgccccga
451 attaaacagt cgagctacgt caacgaaaaa taaaatccaa acatgagccg
501 cctgcccgct ctgctcctgc tccaactcct ggtccgcccc ggactccaag
551 ctccccatgac ccagacaacg tccttgaaga caagctgggt taactgctct
601 aacatgatcg atgaaattat aacacactta aagcagccac ctttgctttt
651 gctggacttc aacaacctca atggggaaga ccaagacatt ctgatggaaa
701 ataaccttcg aaggccaaac ctggaggcat tcaacagggc tgtcaagagt
751 ttacagaacg catcagcaat tgagagcatt cttaaaaatc tctgcatg
801 tctgccctcg gccacggcgg caccacgcg acatccaatc catatcaagg
851 acggtgactg gaatgaattc cggaggaaac tgacgttcta tctgaaaacc
901 cttgagaatg cgcaggtcca acagacgact ttgagcctcg cgatctttta
951 gaactcgact ctagactga taagatacat tgatgagttt ggacaaacca
1001 caactagaat gcagtgaaaa aaatgcttta tttgtgaaat ttgtgatgct
1051 attgctttat ttgtaacctat tataagctgc aataaacaag ttaacaacaa
1101 caattgcatt cattttatgt ttcaggttca gggggagggtg tgggagggtt
1151 tttaaagcaa gtaaaacctc tacaatgtg gtatggctga ttatgatcct
1201 gcaagcctcg tcgtctggcc ggaccacgct atctgtgcaa ggtccccgga
1251 cgcgcgctcc atgagcagag cgcccgcgcg cgaggcaaga ctcgggcggc
1301 gccctggccc tcccaccagg tcaacaggcg gtaaccggcc tcttcacg
1351 gaatgcgcgc gaccttcagc atcgccggca tgtcccctgg cggacgggaa
1401 gtatcagctc gaccaagctt ggcgagattt tcaggagcta aggaagctaa
1451 aatggagaaa aaaatcactg gatataccac cgttgatata tcccaatggc
1501 atcgtaaaag acattttgag gcatttcagt cagttgctca atgtacctat
1551 aaccagaccg ttcagctgca ttaatgaatc ggccaacgcg cggggagagg
1601 cggtttgctg attgggcgct cttccgcttc ctcgctcact gactcgctgc
1651 gctcggtcgt tcggctgcgg cgagcggtat cagctcactc aaagtcggta
1701 atacggttat ccacagaatc aggggataac gcaggaaaga acatgtgagc
1751 aaaaggccag caaaaggcca ggaaccgtaa aaaggccgcg ttgctggcgt
1801 tttccatag gctccgcccc cctgacgagc atcacaaaaa tcgacgctca
1851 agtcagaggt ggcgaaaccc gacaggacta taaagatacc aggcgtttcc
1901 ccttggaagc tccctcgtgc gctctcctgt tccgacctg ccgcttaccg
1951 gatacctgtc cgcctttctc ccttcgggaa gcgtggcgct ttctcaatgc
2001 tcacgctgta ggtatctcag ttcggtgtag gtcgttcgct ccaagctggg
2051 ctgtgtgcct gaaccccccg ttcagcccga ccgctgcgcc ttatccggtg
2101 actatcgctc tgagtccaac ccggtaaagc acgacttatc gccactggaa
2151 gcagccactg gtaacaggat tagcagagcg aggtatgtag gcggtgctac
2201 agagttcttg aagtgggtgg ctaactacgg ctacactaga aggacagtat
2251 ttggtatctg cgctctgctg aagccagtta ccttcggaaa aagagttggt
2301 agctcttgat ccggcaaaac aaccaccgct ggtagcgggt gttttttgt
2351 ttgcaagcag cagattacgc gcagaaaaaa aggatctcaa gaagatcctt
2401 tgatcttttc tacgggtctt gacgctcagt ggaacgaaaa ctacggttaa
2451 gggatttttg tcatgagatt atcaaaaagg atcttcacct agatcctttt
2501 aaattaaaaa tgaagtttta aatcaatcta aagtatatat gagttaaactt
2551 ggtctgacag ttaccaatgc ttaatcagtg aggcacctat ctacgcatc
2601 tgtctatctt gttcatccat agttgcctga ctccccgtcg ttagataaac
2651 tacgataccg gagggtctac catctggccc cagtgctgca atgataccgc
2701 gagaccacag ctacccggct ccagatttat cagcaataaa ccagccagcc
2751 ggaaggcccg agcgcagaag tggctcctgca actttatccg cctccatcca
2801 gtctattaat tgttgccggg aagctagagt aagtagttcg ccagttaata
2851 gtttgcgcaa cgttggtgcc attgctacag gcacgtgtg gtcacgctcg
2901 tcgtttggta tggcttcatt cagctccggg tcccaacgat caaggcgagt
2951 tacatgatcc cccatgttgt gcaaaaaaagc ggttagctcc ttcggtcctc
3001 cgatcgttgt cagaagtaag ttggccgcag tgttatcact catggttatg
3051 gcagcactgc ataattctct tactgtcatg ccatccgtaa gatgcttttc
3101 tgtgactggg gagtactcaa ccaagtcatt ctgagaatag tgtagcggcg
3151 gaccgagttg ctcttgcccg tcgtcaatac gggataatac cgcgccacat
3201 agcagaactt taaaagtgc tcatattgga aaacgttctt cggggcgaaa

```

Fig. 24

3251 actctcaagg atcttacgc tgttgagatc cagttcgatg taaccactc
3301 gtgcacccaa ctgatcttca gcacctttta ctttcaccag cgtttctggg
3351 tgagcaaaaa caggaaggca aaatgccgca aaaaaggga taagggcgac
3401 acggaaatgt tgaatactca tactcttcct ttttcaatat tattgaagca
3451 tttatcaggg ttattgtctc atgagcggat acatatttga atgtatttag
3501 aaaaataaac aaataggggt tccgcgcaca tttcccgaa aagtgccacc
3551 tgacgtctaa gaaaccatta ttatcatgac attaacctat aaaaataggc
3601 gtatcacgag gccctttcgt c

Fig. 24

pUHD10-3-hIL6

Length: 3752 June 22, 1999 10:32 Type: N Check: 8139 ..

```

1  ctcgagttta ccaactcccta tcagtgatag agaaaagtga aagtcgagtt
51  taccactccc tatcagtgat agagaaaagt gaaagtcgag tttaccactc
101 cctatcagtg atagagaaaa gtgaaagtcg agtttaccac tccctatcag
151 tgatagagaa aagtgaaggt cgagtttacc actccctatc agtgatagag
201 aaaagtgaag gtcgagttta ccaactcccta tcagtgatag agaaaagtga
251 aagtcgagtt taccactccc tatcagtgat agagaaaagt gaaagtcgag
301 ctcggtaccc gggtcgagta ggcgtgtacg gtgggaggcc tatataagca
351 gagctcggtt agtgaaccgt cagatcgctt ggagacgcca tccacgctgt
401 tttgacctcc atagaagaca ccgggaccga tccagcctcc gcggtggcgg
451 ccgctctaga actagtggat cccccagctt acctgccatg ccagtagccc
501 caggagaaga ttocaaagat gtagccgccc cacacagaca gccactcacc
551 tcttcagAAC gaattgacaa acaaattcgg tacatcctcg acggcatctc
601 agccctgaga aaggagacat gtaacaagag taacatgtgt gaaagcagca
651 aagaggcact ggcagaaaaa aacctgaacc ttccaaagat ggctgaaaaa
701 gatggatgct tccaatctgg attcaatgag gagacttgcc tgggtgaaat
751 catcactggg tttttggagt ttgaggtata cctagagtac ctccagaaca
801 gatttgagag tagtgaggaa caagccagag ctgtccagat gagtacaaaa
851 gtcctgatcc agttcctgca gaaaaaggca aagaatctag atgcaataac
901 caccctgac ccaaccacaa atgccagcct gctgacgaag ctgcaggcac
951 agaaccagtg gctgcaggac atgacaactc atctcattct gcgcagcttt
1001 aaggagttcc tgcagtcagg cctgagggct cttcggcaaa tgtagtaagg
1051 atccgaattc gagctcggtg cccggggatc ctctagagga tccagacatg
1101 ataagataca ttgatgagtt tggacaaacc acaactagaa tgcagtgaag
1151 aaaatgcttt atttgtgaaa tttgtgatgc tattgcttta tttgtaacca
1201 ttataagctg caataaacaa gttaacaaca acaattgcat tcattttatg
1251 tttcagggtt agggggaggt gtgggaggtt ttttaaagca agtaaaacct
1301 ctacaaatgt ggtatggctg attatgatcc tgcaagcctc gtcgtctggc
1351 cggaccacgc tatctgtgca aggtccccgg acgcgcgctc catgagcaga
1401 gcgcccgcgc ccgaggcaag actcgggagg cgccctgccc gtcccaccag
1451 gtcaacaggc ggtaaccggc ctcttcacgc ggaatgcgcg cgaccttcag
1501 catcgccggc atgtcccctg gcggacggga agtatcagct cgaccaagct
1551 tggcgagatt ttcaggagct aaggaagcta aaatggagaa aaaaatcact
1601 ggatatacca ccgttgatat atcccaatgg catcgtaaag aacattttga
1651 ggcatttcag tcagttgctc aatgtaccta taaccagacc gttcagctgc
1701 attaatgaat cggccaacgc gcggggagag gcggtttgcg tattgggcgc
1751 tcttcgctt cctcgctcac tgactcgctg cgctcggtcg ttcggctgcg
1801 gcgagcggtg tcagctcact caaagtcggt aatacggtta tccacagaat
1851 caggggataa cgcaggaaag aacatgtgag caaaaggcca gcaaaaggcc
1901 aggaaccgta aaaaggccgc gttgctggcg tttttccata ggctccgccc
1951 ccctgacgag catcacaaaa atcgacgctc aagtcagagg tggcgaaaac
2001 cgacaggact ataaagatac caggcgtttc cccctggaag ctccctcgctg
2051 cgctctcctg ttccgacctt gccgcttacc ggatacctgt ccgcctttct
2101 cccttcggga agcgtggcgc tttctcaatg ctacgcgtgt aggtatctca
2151 gttcgtgtga ggtcgttcgc tccaagctgg gctgtgtgca cgaaccccc
2201 gttcagcccg accgctgcgc ctatccggtt aactatcgct ttgagtccaa
2251 cccggttaaga caccgacttat gccactgga agcagccact ggtaacagga
2301 ttagcagagc gaggtatgta ggcggtgcta cagagttctt gaagtgggtg
2351 cctaactacg gctacactag aaggacagta tttggtatct gcgctctgct
2401 gaagccagtt accttcggaa aaagagttgg tagctcttga tccggcaaac
2451 aaaccaccgc tggtagcggg ggtttttttg tttgcaagca gcagattacg
2501 cgcagaaaaa aaggatctca agaagatcct ttgatctttt ctacggggtc
2551 tgacgctcag tggaaacgaaa actcacgtta agggattttg gtcattgagat
2601 tatcaaaaag gatcttcacc tagatccttt taaattaaaa atgaagtttt
2651 aaatcaatct aaagtatata tgagtaaact tggcttgaca gttaccaatg
2701 cttaatcagt gaggcacctc tctcagcgat ctgtctatct cgttcatcca
2751 tagttgcctg actccccgct gtgtagataa ctacgatacg ggagggtcta
2801 ccatctggcc ccagtgtgc aatgataccg cgagaccac gctcaccggc
2851 tccagattta tcagcaataa accagccagc cggaagggcc gagcgcagaa
2901 gtggtcctgc aactttatcc gcctccatcc agtctattaa ttggtgccgg
2951 gaagctagag taagtagttc gccagttaat agtttgcgca acgttggtgc
3001 cattgctaca ggcacgtgtt ggtcacgctc gtcgtttggt atggcttcat
3051 tcagctccgg ttcccaacga tcaaggcgag ttacatgatc ccccatgttg
3101 tgcaaaaaag cgggttagctc cttcggtcct ccgatcggtg tcagaagtaa
3151 gttggccgca gtgttatcac tcatggttat ggcagcactg cataattctc

```

3201 ttactgtcat gccatccgta agatgctttt ctgtgactgg tgagtactca
3251 accaagtcac tctgagaata gtgtatgcgg cgaccgagtt gctcttgccc
3301 gtcgtcaata cgggataata ccgcgccaca tagcagaact ttaaaagtgc
3351 tcatcattgg aaaacgttct tcggggcgaa aactctcaag gatcttacgg
3401 ctgttgagat ccagttcgat gtaaccact cgtgcaccca actgatcttc
3451 agcatctttt actttcacca gcgtttctgg gtgagcaaaa acaggaaggc
3501 aaaatgccgc aaaaaaggga ataaggcgca cacggaaatg ttgaatactc
3551 atactcttcc tttttcaata ttattgaagc atttatcagg gttattgtct
3601 catgagcgga tacatatattg aatgtattta gaaaaataaa caaatagggg
3651 ttccgcgcac atttccccga aaagtgccac ctgacgtcta agaaaccatt
3701 attatcatga cattaaccta taaaaatagg cgtatcacga ggccctttcg
3751 tc

Fig. 25

puhd10-3-tgf

```

1  ctcgagttttaccactccctatcagtgatagagaaaagtgaaagtcgagttttaccactccc 60
   -----+-----+-----+-----+-----+-----+-----+
61  tatcagtgatagagaaaagtgaaagtcgagttttaccactccctatcagtgatagagaaaa 120
   -----+-----+-----+-----+-----+-----+-----+
121  gtgaaagtcgagttttaccactccctatcagtgatagagaaaagtgaaagtcgagttttacc 180
   -----+-----+-----+-----+-----+-----+-----+
181  actccctatcagtgatagagaaaagtgaaagtcgagttttaccactccctatcagtgatag 240
   -----+-----+-----+-----+-----+-----+-----+
241  agaaaagtgaaagtcgagttttaccactccctatcagtgatagagaaaagtgaaagtcgag 300
   -----+-----+-----+-----+-----+-----+-----+
301  ctcggtaccggggtcgagtaggcgtgtacggtgggaggcctatataagcagagctcgttt 360
   -----+-----+-----+-----+-----+-----+-----+
361  agtgaaccgtcagatcgctggagacgccatccacgctgttttgacctccatagaagaca 420
   -----+-----+-----+-----+-----+-----+-----+
421  ccgggaccgatccagcctccggcgccccgaattcctgcagcccATGCACTTGCAAAGGGC 480
   -----+-----+-----+-----+-----+-----+-----+
481  TCTGGTAGTCCTGGCCCTGCTGAACTTGGCCACAATCAGCCTCTCTCTGTCCACTTGCAC 540
   -----+-----+-----+-----+-----+-----+-----+
541  CACGTTGGACTTCGGCCACATCAAGAAGAAGAGGGTGAAGCCATTAGGGGACAGATCTT 600
   -----+-----+-----+-----+-----+-----+-----+
601  GAGCAAGCTCAGGCTCACCAGCCCCCTGAGCCATCGGTGATGACCCACGTCCCCTATCA 660
   -----+-----+-----+-----+-----+-----+-----+
661  GGTCTTGGCACTTTACAACAGCACCCGGGAGTTGCTGGAAGAGATGCACGGGGAGAGGGA 720
   -----+-----+-----+-----+-----+-----+-----+
721  GGAAGGCTGCACTCAGGAGACCTCGGAGTCTGAGTACTATGCCAAAGAGATCCATAAATT 780
   -----+-----+-----+-----+-----+-----+-----+
781  CGACATGATCCAGGGACTGGCGGAGCACAACTGAACTGGCCGTCTGCCCCAAAGGAATTAC 840
   -----+-----+-----+-----+-----+-----+-----+
841  CTCTAAGGTTTTTCGTTTCAATGTGTCTCAGTGGAGAAAAATGGAACCAATCTGTTCCG 900
   -----+-----+-----+-----+-----+-----+-----+
901  GGCAGAGTTCCGGGTCTTGCGGGTGCCCAACCCAGCTCCAAGCGCACAGAGCAGAGAAT 960
   -----+-----+-----+-----+-----+-----+-----+
961  TGAGCTCTTCCAGATACTTCGACCGGATGAGCACATAGCCAAGCAGCGCTACATAGGTGG 1020
   -----+-----+-----+-----+-----+-----+-----+
1021  CAAGAATCTGCCCACAAGGGGCACCGCTGAATGGCTGTCTTTTCGATGTCACTGACACTGT 1080
   -----+-----+-----+-----+-----+-----+-----+
1081  GCGCGAGTGGCTGTTGAGGAGAGAGTCCAACTTGGGTCTGGAAATCAGCATCCACTGTCC 1140
   -----+-----+-----+-----+-----+-----+-----+
1141  ATGTCACACCTTTTCAGCCCAATGGAGACATACTGGAAAATGTTTCATGAGGTGATGGAAAT 1200
   -----+-----+-----+-----+-----+-----+-----+
1201  CAAATTCAAAGGAGTGGACAATGAAGATGACCATGGCCGTGGAGACCTGGGGCGTCTCAA 1260
   -----+-----+-----+-----+-----+-----+-----+
1261  GAAGCAAAGGATCACCACAACCCACACCTGATCCTCATGATGATCCCCCACACCGACT 1320
   -----+-----+-----+-----+-----+-----+-----+

```

Fig. 26

1321 GGACAGCCCAGGCCAGGGCAGTCAGAGGAAGAAGAGGGCCCTGGACACCAATTACTGCTT
 1380
 1381 CCGCAACCTGGAGGAGAACTGCTGTGTACGCCCCCTTTATATTGACTTCCGGCAGGATCT
 1440
 1441 AGGCTGGAAATGGGTCCACGAACCTAAGGGTTACTATGCCAACTTCTGCTCAGGCCCTTG
 1500
 1501 CCCATACCTCCGCAGCGCAGACACAACCCATAGCACGGTGCTTGGACTATACAACACCCT
 1560
 1561 GAACCCAGAGGCGTCTGCCTCGCCATGCTGCGTCCCCCAGGACCTGGAGCCCCTGACCAT
 1620
 1621 CTTGTACTATGTGGGCAGAACCCCCAAGGTGGAGCAGCTGTCCAACATGGTGGTGAAGTC
 1680
 1681 GTGTAAGTGCAGCTGAgggggatccactagttctagaggatccagacatgataagataca
 1740
 1741 ttgatgagtttggacaaaccacaactagaatgcagtgaaaaaaatgctttatttgtgaaa
 1800
 1801 tttgtgatgctattgctttatttgaaccattataagctgcaataaacaagttaacaaca
 1860
 1861 acaattgcattcattttatgtttcaggttcagggggaggtgtgggaggttttttaaagca
 1920
 1921 agtaaaacctctacaaatgtggtatggctgattatgatcctgcaagcctcgctcgtctggc
 1980
 1981 cggaccacgctatctgtgcaaggtccccggacgcgcgctccatgagcagagcgcccgccg
 2040
 2041 ccgaggcaagactcgggcggcgccctgcccgtcccaccaggtcaacaggcggttaaccggc
 2100
 2101 ctcttcacgcgggaatgcgcgcgaccttcagcatcgccggcatgtcccctggcgagcgga
 2160
 2161 agtatcagctcgaccaagcttggcgagattttcaggagctaaggaagctaaaatggagaa
 2220
 2221 aaaaatcactggatataccaccggttgatataatccaatggcatcgtaagaacattttga
 2280
 2281 ggcatttcagtcagttgctcaatgtacctataaccagaccggttcagctgcattaatgaat
 2340
 2341 cggccaacgcgcggggagaggcggtttgcgtattgggcgctcttcgcttcctcgctcac
 2400
 2401 tgactcgctgcgctcggtcggttcggctgcggcgagcggtatcagctcactcaaagtcggt
 2460
 2461 aatacggttatccacagaatcaggggataacgcaggaaagaacatgtgagcaaaaggcca
 2520
 2521 gcaaaaggccaggaaccgtaaaaaggccgcttgctggcggtttttccataggctccgccc
 2580
 2581 ccctgacgagcatcacaaaaatcgacgctcaagtcagaggtggcgaaacccgacaggact
 2640

Fig. 26.

2641 ataaagataaccaggcggtttccccctggaagctccctcgctgcgtctctctgttccgaccct 2700
 -----+-----+-----+-----+-----+-----+
 2701 gccgcttacgggatacctgtccgcctttctcccttcgggaagcgtggcgctttctcaatg 2760
 -----+-----+-----+-----+-----+-----+
 2761 ctcacgctgttaggtatctcagttcgggtgtaggtcgcttccgctccaagctgggctgtgtgca 2820
 -----+-----+-----+-----+-----+-----+
 2821 cgaaccccccggttcagcccgaccgctgcgccttatccggttaactatcgtcttgagtccaa 2880
 -----+-----+-----+-----+-----+-----+
 2881 cccggttaagacacgacttatcgccactggaagcagccactggtaacaggattagcagagc 2940
 -----+-----+-----+-----+-----+-----+
 2941 gaggtatgtaggcgggtgctacagagttcttgaagtggcctaactacggctacactag 3000
 -----+-----+-----+-----+-----+-----+
 3001 aaggacagtatttggtatctgcgctctgctgaagccagttaccttcggaaaaagagttgg 3060
 -----+-----+-----+-----+-----+-----+
 3061 tagctcttgatccggcaaaacaaaccacgctggtagcgggtggttttttgtttgcaagca 3120
 -----+-----+-----+-----+-----+-----+
 3121 gcagattacgcgcagaaaaaaaggatctcaagaagatcctttgatcttttctacggggtc 3180
 -----+-----+-----+-----+-----+-----+
 3181 tgacgctcagtggaacgaaaactcacgttaagggattttggtcatgagattatcaaaaag 3240
 -----+-----+-----+-----+-----+-----+
 3241 gatcttcacctagatccttttaaattaaaaatgaagttttaaatcaatctaaagtatata 3300
 -----+-----+-----+-----+-----+-----+
 3301 tgagtaaaacttggtctgacagttaccaatgcttaatcagtgaggcacctatctcagcgat 3360
 -----+-----+-----+-----+-----+-----+
 3361 ctgtctatttcggtcatccatagttgcctgactccccgctcgtgtagataactacgatacg 3420
 -----+-----+-----+-----+-----+-----+
 3421 ggagggccttaccatctggccccagtgctgcaatgataccgcgagaccacgctcaccggc 3480
 -----+-----+-----+-----+-----+-----+
 3481 tccagatttatcagcaataaaccagccagccggaagggccgagcgcagaagtggctcctgc 3540
 -----+-----+-----+-----+-----+-----+
 3541 aactttatccgcctccatccagttctattaattggtgcccgggaagctagagtaagtagttc 3600
 -----+-----+-----+-----+-----+-----+
 3601 gccagttaatagtttgcgcaacggttggtgccattgctacaggcatcgtgtggtcacgctc 3660
 -----+-----+-----+-----+-----+-----+
 3661 gtcgtttggtatggcttcattcagctccggttcccaacgatcaaggcgagttacatgatc 3720
 -----+-----+-----+-----+-----+-----+
 3721 ccccatgttggtgcaaaaaagcggttagctccttcggtcctccgatcgttgtcagaagtaa 3780
 -----+-----+-----+-----+-----+-----+
 3781 gttggccgcagtggttatcactcatggttatggcagcactgcataattctcttactgtcat 3840
 -----+-----+-----+-----+-----+-----+
 3841 gccatccgtaagatgcttttctgtgactggtgagtactcaaccaagtcattctgagaata 3900
 -----+-----+-----+-----+-----+-----+
 3901 gtgtatgcggcgacccaggttgctcttgccgctcgtcaatacgggataataccgcgccaca 3960
 -----+-----+-----+-----+-----+-----+
 tagcagaactttaaaagtgctcatcattggaacggttcttcggggcgaaaactctcaag

Fig. 26

3961 -----+-----+-----+-----+-----+-----+ 4020
gatcttaccgctgttgagatccagttcgatgtaaccactcgtgcacccaactgatcttc
4021 -----+-----+-----+-----+-----+ 4080
agcatctttttactttcaccagcgtttctgggtgagcaaaaacaggaaggcaaatgccgc
4081 -----+-----+-----+-----+-----+ 4140
aaaaaaggaataaggcgacacggaaatgttgaatactcatactcttcctttttcaata
4141 -----+-----+-----+-----+-----+ 4200
ttattgaagcatttatcagggttattgtctcatgagcggatacatatttgaatgtattta
4201 -----+-----+-----+-----+-----+ 4260
gaaaaataaacaatataggggttcgcgcacatttccccgaaaagtgccacctgacgtcta
4261 -----+-----+-----+-----+-----+ 4320
agaaaccattattatcatgacattaacctataaaaaataggcgtatcacgaggccctttcg
4321 -----+-----+-----+-----+-----+ 4380
tc
4381 -- 4382

Fig. 26

0057458-02401

pUHD10.3-hft3 Ligand-exon 6 plasmid Length: 4224

1 CTCGAGTTTA CCACTCCCTA TCAGTGATAG AGAAAAGTGA AAGTCGAGTT
 51 TACCACTCCC TATCAGTGAT AGAGAAAAGT GAAAGTCGAG TTTACCACTC
 101 CCTATCAGTG ATAGAGAAAA GTGAAAGTCG AGTTTACCAC TCCCTATCAG
 151 TGATAGAGAA AAGTGAAAGT CGAGTTTACC ACTCCCTATC AGTGATAGAG
 201 AAAAGTGAAA GTCGAGTTTA CCACTCCCTA TCAGTGATAG AGAAAAGTGA
 251 AAGTCGAGTT TACCACTCCC TATCAGTGAT AGAGAAAAGT GAAAGTCGAG
 301 CTCGGTACCC GGGTCGAGTA GCGGTGTACG GTGGGAGGCC TATATAAGCA
 351 GAGCTCGTTT AGTGAACCGT CAGATCGCCT GGAGACGCCA TCCACGCTGT
 401 TTTGACCTCC ATAGAAGACA CCGGGACCGA TCCAGCCTCC GCGGCCCCGA
 451 ATTCCggggc ccccgccga aATGacagtg ctgggccag cctggagccc
 501 aacaacctat ctctctgc tgctgtgt gagctggga ctgagtgga
 551 ccaggactg ctcttcaa cacagccca tctctcga ctctgtgt
 601 aaaatccgtg agctgtgt ctacctgt caagattacc cagtcaccgt
 651 ggctccaac ctgcaggacg aggagctctg cgggggcctc tggcggtgg
 701 tctggcaca gcgtggatg gagcggtca agactgtgc tgggtccaag
 751 atgcaaggt tctggagcg cgtgaacag gagatact tgtcacaa
 801 atgtgcctt cagcccccc ccagctgtct tctctctc cagaccaaca
 851 tctccgcct cctgcaggag acctccgagc agctggggc gctgaagccc
 901 tggatcact gccagaact ctcccggtgc ctggagctgc agtgtcagcc
 951 cgtagagacg gtgttcacc gtgtcagcca ggatggctc gatctctga
 1001 cctgTGAtc tgcccgcctc ggctcccaa agtctagga ttacagatac
 1051 tctcaaccc tgccacccc atggagtccc cggcccctgg aggccacagc
 1101 cccgacagcc ccgagcccc ctctgtctct cctactgtc ctgcccgtgg
 1151 gcctctgtc gctggccgt gcctgggtgc tgcactggca gaggacgagg
 1201 cggaggacac ccgcccctgg ggagcagggt ccccccgtcc ccagtccca
 1251 ggacctgtc ctgtggagc actgacctgg ccaaggcctc atcctgcgga
 1301 gccttaaca acgcagttag acagacatc atcatccat ttacagggg
 1351 aggatactga ggcacacaga ggggagtcac cagccagagg atgtatagcc
 1401 tggacacaga ggaagtggc tagaggccgg tcccttctt gggcccctct
 1451 cattccctcc ccagaatgga ggcaacgcca gaatccagca ccggcccat
 1501 ttaccaact ctgaacaaag cccCCGGAAT TCGAGCTCGG TACCCGGGGA

Fig. 26a

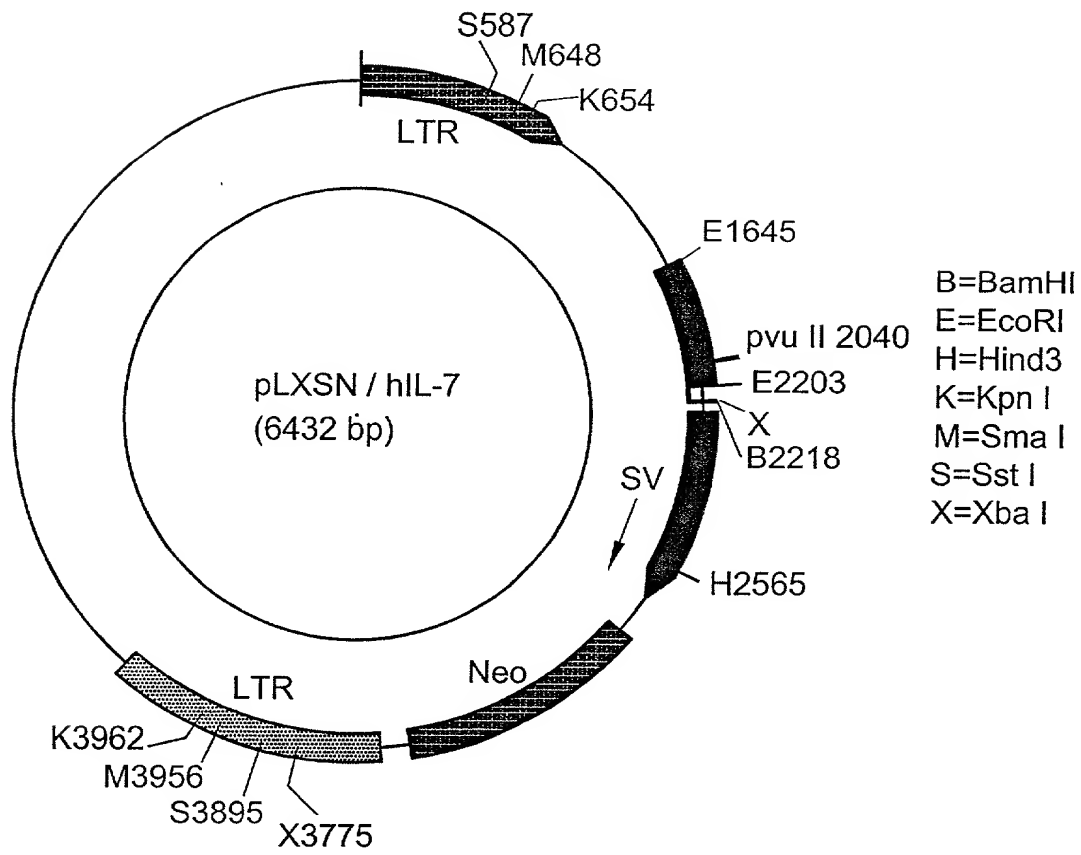
1551 TCCTCTAGAG GATCCAGACA TGATAAGATA CATTGATGAG TTTGGACAAA
 1601 CCACAACCTAG AATGCAGTGA AAAAAATGCT TTATTTGTGA AATTTGTGAT
 1651 GCTATTGCTT TATTTGTAAC CATTATAAGC TGCAATAAAC AAGTTAACAA
 1701 CAACAATTGC ATTCATTTTA TGTTTCAGGT TCAGGGGGAG GTGTGGGAGG
 1751 TTTTAAAG CAAGTAAAC CTCTACAAAT GTGGTATGGC TGATTATGAT
 1801 CCTGCAAGCC TCGTCGTCTG GCCGGACCAC GCTATCTGTG CAAGGTCCCC
 1851 GGACGCGCGC TCCATGAGCA GAGCGCCCGC CGCCGAGGCA AGACTCGGGC
 1901 GGCGCCCTGC CCGTCCCACC AGGTCAACAG GCGGTAACCG GCCTCTTCAT
 1951 CGGGAATGCG CGCGACCTTC AGCATCGCCG GCATGTCCCC TGGCGGACGG
 2001 GAAGTATCAG CTCGACCAAG CTGGCGAGA TTTTCAGGAG CTAAGGAAGC
 2051 TAAAATGGAG AAAAAATCA CTGGATATAC CACCGTTGAT ATATCCCAAT
 2101 GGCATCGTAA AGAACATTTT GAGGCATTTT AGTCAGTTGC TCAATGTACC
 2151 TATAACCAGA CCGTTCAGCT GCATTAATGA ATCGGCCAAC GCGCGGGGAG
 2201 AGGCGGTTTG CGTATTGGGC GCTCTTCCGC TTCCTCGCTC ACTGACTCGC
 2251 TGCCTCGGT CGTTCGGCTG CGGCGAGCGG TATCAGCTCA CTCAAAGGCG
 2301 GTAATACGGT TATCCACAGA ATCAGGGGAT AACGCAGGAA AGAACATGTG
 2351 AGCAAAAGGC CAGCAAAAGG CCAGGAACCG TAAAAGGCC GCGTTGCTGG
 2401 CGTTTTTCCA TAGGCTCCGC CCCCTGACG AGCATCACAA AAATCGACGC
 2451 TCAAGTCAGA GGTGGCGAAA CCCGACAGGA CTATAAAGAT ACCAGGCGTT
 2501 TCCCCCTGGA AGCTCCCTCG TGCCTCTCC TGTTCCGACC CTGCCGCTTA
 2551 CCGGATACCT GTCCGCCTTT CTCCCTTCGG GAAGCGTGGC GCTTTCTCAA
 2601 TGCTCACGCT GTAGGTATCT CAGTTCGGTG TAGGTCGTTT GCTCCAAGCT
 2651 GGGCTGTGTG CACGAACCCC CCGTTCAGCC CGACCGCTGC GCCTTATCCG
 2701 GTAACATCG TCTTGAGTCC AACCCGGTAA GACACGACTT ATCGCCACTG
 2751 GCAGCAGCCA CTGGTAACAG GATTAGCAGA GCGAGGTATG TAGGCGGTGC
 2801 TACAGAGTTC TTGAAGTGGT GGCCTAACTA CGGCTACACT AGAAGGACAG
 2851 TATTTGGTAT CTGCGCTCTG CTGAAGCCAG TTACCTTCGG AAAAAGAGTT
 2901 GGTAGCTCTT GATCCGGCAA ACAAACCACC GCTGGTAGCG GTGGTTTTTT
 2951 TGTTTGCAAG CAGCAGATTA CGCGCAGAAA AAAAGGATCT CAAGAAGATC
 3001 CTTTGATCTT TTCTACGGGG TCTGACGCTC AGTGGAACGA AAACTCACGT
 3051 TAAGGGATTT TGGTCATGAG ATTATCAAAA AGGATCTTCA CCTAGATCCT
 3101 TTAAATTA AAATGAAGTT TAAATCAAT CTAAAGTATA TATGAGTAAA
 3151 CTTGGTCTGA CAGTTACCAA TGCTTAATCA GTGAGGCACC TATCTCAGCG

Fig. 26a

3201 ATCTGTCTAT TTCGTTTCATC CATAGTTGCC TGA TCCCCG TCGTGTAGAT
3251 AACTACGATA CGGGAGGGCT TACCATCTGG CCCCAGTGCT GCAATGATAC
3301 CGCGAGACCC ACGCTCACCG GCTCCAGATT TATCAGCAAT AAACCAGCCA
3351 GCCGGAAGGG CCGAGCGCAG AAGTGGTCCT GCAACTTTAT CCGCCTCCAT
3401 CCAGTCTATT AATTGTTGCC GGGAAAGCTAG AGTAAGTAGT TCGCCAGTTA
3451 ATAGTTTGCG CAACGTTGTT GCCATTGCTA CAGGCATCGT GGTGTCACGC
3501 TCGTCGTTTG GTATGGCTTC ATTCAGCTCC GGTTCCCAAC GATCAAGGCG
3551 AGTTACATGA TCCCCATGT TGTGCAAAAA AGCGGTTAGC TCCTTCGGTC
3601 CTCCGATCGT TGTCAGAAAGT AAGTTGGCCG CAGTGTTATC ACTCATGGTT
3651 ATGGCAGCAC TGCATAATTC TCTTACTGTC ATGCCATCCG TAAGATGCTT
3701 TTCTGTGACT GGTGAGTACT CAACCAAGTC ATTCTGAGAA TAGTGTATGC
3751 GGCGACCGAG TTGCTCTTGC CCGGCGTCAA TACGGGATAA TACCGCGCCA
3801 CATAGCAGAA CTTTAAAAGT GCTCATCATT GGAAAACGTT CTTCGGGGCG
3851 AAAACTCTCA AGGATCTTAC CGCTGTTGAG ATCCAGTTCG ATGTAACCCA
3901 CTCGTGCACC CAACTGATCT TCAGCATCTT TTA CTTTCAC CAGCGTTTCT
3951 GGGTGAGCAA AAACAGGAAG GCAAAATGCC GCAAAAAAGG GAATAAGGGC
4001 GACACGGAAA TGTTGAATAC TCATACTCTT CCTTTTCAA TATTATTGAA
4051 GCATTTATCA GGGTTATTGT CTCATGAGCG GATACATATT TGAATGTATT
4101 TAGAAAAATA AACAAATAGG GGTCCGCGC ACATTTCCCC GAAAAGTGCC
4151 ACCTGACGTC TAAGAAACCA TTATTATCAT GACATTAACC TATAAAAATA
4201 GGCGTATCAC GAGGCCCTTT CGTC

Fig. 26a

Recovery of insert: EcoRI



Ref. (HSIL7A)

Insert:375(-10)

E

770

pvu II

933(+5)

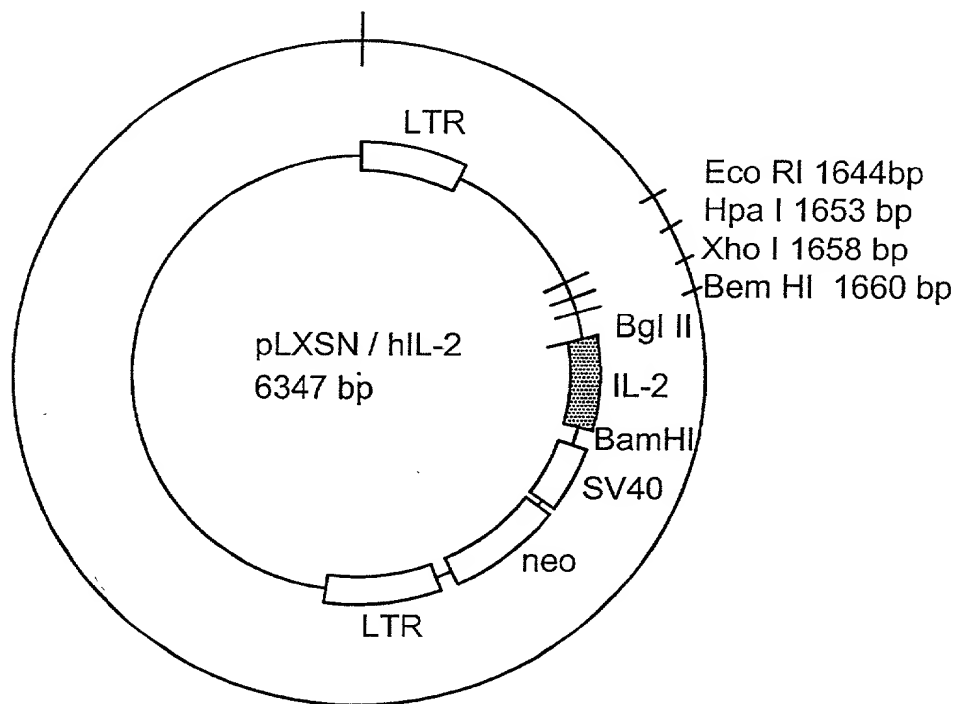
E

FIG.27

- 56/56 -

Plasmid-chart

| | | |
|---------------------|-----------------|---|
| Designation: | pLXSN/hIL-2 | Log no.: |
| Insert: | hIL-2 (473bp) | Location: |
| Vector: | pLXSN (5874bp) | Selection: Amp |
| Recovery of insert: | Eco RI / Bam HI | Ref.: pLXSN BioTechniques 7,980-987(1989) |
| | Hpa I / Bam HI | hIL-2 Nature 302,305-309(1983) |
| | Xho I / Bam HI | |



Insert: Bgl II
5' AGA TCT ACA - IL-2 - TAA TTA AGT BamHI 473 bp

FIG.28